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John Arthur Smith

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Music in Religious Cults of the Ancient Near East

Music in Religious Cults of the Ancient Near East presents the first extended discussion of the relationship between music and cultic worship in ancient western Asia. The book covers ancient Israel and Judah, the Levant, Anatolia, Mesopotamia, Elam, and ancient Egypt, focusing on the period from approximately 3000 BCE to around 586 BCE. This wide-ranging book brings together insights from ancient archaeological, iconographic, written, and musical sources, as well as from modern scholarship. Through careful analysis, comparison, and evaluation of those sources, the author builds a picture of a world where religious culture was predominant and where music was intrinsic to common cultic activity.

John Arthur Smith was an independent scholar and organist based in Norway. He was the author of *Music in Ancient Judaism and Early Christianity* (Ashgate, 2011), and had published numerous journal articles, book chapters, and articles in reference works.

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John Arthur Smith

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I dedicate this book to the memory of my sister

**Malinda Gladys Hammond (née Smith), 7 June 1949 –
23 September 2019**

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Contents

List of figures xi
List of tables xii
Preface xiii
Author's note xx
Acknowledgements xxii
List of abbreviations xxiv

1 Introduction 1
1.1 The ancient Near East as treated here 1
1.2 Religion in the ancient Near East 2
1.2.1 Religion as culture 2
1.2.2 Theology: monotheism, polytheism and syncretism 3
1.2.2.1 Introduction 3
1.2.2.2 Levant 3
1.2.2.3 Anatolia 5
1.2.2.4 Mesopotamia 5
1.2.2.5 Egypt 6
1.2.3 Worship 6
1.3 Spatial setting of cultic activity 7
1.3.1 Introduction 7
1.3.2 Temples 8
1.3.2.1 Levant 9
1.3.2.2 Anatolia 12
1.3.2.3 Mesopotamia 13
1.3.2.4 Egypt 14
1.3.3 Open-air cultic installations and other sacred structures 16
1.3.3.1 Introduction 16
1.3.3.2 Levant 17
1.3.3.3 Anatolia 19
1.3.3.4 In Mesopotamia and Egypt? 19

1.3.3.5 An open-air cultic installation in Elam 20
References 24

2 Types of cultic activity and the music associated with them, 1 30
2.1 Introduction 30
2.2 Music at liturgies and rituals 30
2.2.1 Israel, Judah and the Levant 30
2.2.2 Anatolia 35
2.2.3 Mesopotamia 36
2.2.4 Egypt 39
2.3 Music in processions 41
2.3.1 Introduction 41
2.3.2 Israel and Judah 41
2.3.3 Anatolia 43
2.3.4 Mesopotamia 44
2.3.5 Egypt 45
2.4 Music and cultic dance 46
2.4.1 Israel and Judah 46
2.4.2 Anatolia 48
2.4.3 Mesopotamia 49
2.4.4 Egypt 49
References 55

3 Types of cultic activity and the music associated with them, 2 59
3.1 Mantic traditions and music 59
3.1.1 Israel and Judah 59
3.1.2 Anatolia 61
3.1.3 Mesopotamia 62
3.1.4 Egypt 64
3.2 Warfare and music 64
3.2.1 Israel, Judah and the Levant 64
3.2.2 Anatolia 68
3.2.3 Mesopotamia 68
3.2.4 Egypt 72
References 79

4 Musical media, 1: the human voice, chordophones and aerophones 82
4.1 The human voice 82
4.2 Musical instruments: general introduction 83
4.3 Chordophones: plucked-string instruments 83
4.3.1 Lyres and harps 83
4.3.1.1 Structural features of lyres and harps 84

4.3.1.2 Consequences of structure for tuning 87
4.3.1.3 Playing methods 88
4.3.2 Lutes 89
4.3.2.1 Structural features of lutes 90
4.3.2.2 Playing methods 91
4.4 Aerophones, 1: lip-vibrated wind instruments 91
4.4.1 Trumpets and natural horns 91
4.4.1.1 Trumpets 92
4.4.1.2 Horns 94
4.5 Aerophones, 2: reed-vibrated and edge- and end-blown pipes 96
4.5.1 Definitions 96
4.5.2 Identification in ancient iconographic sources 97
4.5.3 Identification in ancient written sources 98
4.5.4 Archaeological remains 98
4.5.5 Use in cultic contexts 100
References 102

5 Musical media, 2: membranophones (drums) and idiophones 106
5.1 Membranophones (drums) 106
5.1.1 Hand drums 106
5.1.2 Hourglass-shaped drums 107
5.1.3 Barrel-shaped and cylindrical drums 107
5.1.4 Large drums 108
5.1.4.1 The designation **balaĝ/balang** *108*
5.1.5 Methods of playing the drums 109
5.1.6 The sound of the drums 109
5.2 Idiophones 110
5.2.1 Clashing instruments 110
5.2.1.1 Cymbals 110
5.2.2 Clapping instruments 112
5.2.2.1 Paired flat clappers 112
5.2.2.2 Hinged clappers 113
5.2.3 Shaking instruments 113
5.2.3.1 Enclosed rattles 113
5.2.3.2 Sistrums 117
5.2.3.3 Bells 119
5.2.3.4 The menat 124
References 127

6 Musical media, 3: groups and ensembles; sanctity and divinisation; organisation and administration 131
6.1 Groups and ensembles 131
6.1.1 Introduction 131

6.1.2 In large-scale liturgies and rituals, typically temple-based 132
6.1.3 In large-scale processions, typically out of doors, often into temples 133
6.1.4 In small-scale rituals and processions 133
6.2 Sanctity and divinisation 134
6.2.1 Sanctity 134
6.2.2 Divinisation 136
6.3 Organisation and administration of cultic music 137
6.3.1 Introduction 137
6.3.2 Mesopotamia 138
6.3.3 Egypt 138
6.3.4 Israel and Judah 139
6.4 Concluding remarks about musical media 145
References 148

7 Approaching the musical sound-world 150
7.1 Introduction 150
7.2 The concept of 'music' 150
7.3 The idiom of instrumental music 152
7.3.1 Organology: general characteristics of instrumental sound 153
7.3.2 Musicology: pitch and structure of instrumental sound 153
7.3.3 The group of tablets from Babylonia 154
7.3.3.1 Music theory in the Babylonian tablets 155
7.3.4 The group of tablets from Ugarit 160
7.3.4.1 Music theory in the group of tablets from Ugarit 160
7.3.5 Issues and challenges 161
7.4 The idiom of vocal music 163
7.5 Concluding remarks 165
7.5.1 What is not known or doubtful 166
7.5.2 What is known or can reasonably be assumed 166
7.5.3 Suggestions for further research 168
7.5.3.1 Extending existing ideas 168
7.5.3.2 Exploring new areas 169
References 172

Appendix 177
Index of Ancient Greek, Latin and Near Eastern words and phrases 180
General index 182

Figures

1.1 Ain Dara Temple. Annotated archaeological ground plan after the third building phase 11
1.2 Medinet Habu. Mortuary temple of Ramesses III. Aerial view of remains 16
1.3 Susa. The *sit shamshi*, a bronze model of an open-air cultic place, *c.*1150 BCE 20
2.1 Three female musicians playing (from L to R) double pipe, long-necked lute, harp 46
2.2 Thebes. Two *muu* dancers 50
3.1 Nineveh, palace of Ashurbanipal, *c.*653 BCE. Retreating Elamites 71
4.1 Zincirli, southeast Anatolia, eighth century BCE. Procession with hand drums and symmetrical and asymmetrical lyres 86
4.2 Kawa, Upper Egypt (now northern Sudan). Temple of Taharqa (built 684–680 BCE) 87
4.3 Egyptian double-tube reedpipe for single reeds 97

Tables

4.1 Translations of the biblical Hebrew terms *kinnôr*, *minniy*(*m*) and *nebel*, in HB Psalms 45, 57, 71, 81, 108 and 150, in eight English-language renderings of the Bible 85
4.2 Basic measurements of the trumpets from Tutankhamun's tomb (KV62), according to two twentieth-century sources 93
5.1 Ancient Egyptian earthenware enclosed rattles without handles, catalogued by Hickmann (1949) 115
5.2 Ancient Egyptian grass rattles with handles, catalogued by Hickmann (1949) 116
6.1 Musical media in cultic processions in ancient Israel/Palestine 133
7.1 Tablet CBS 10996: schematic presentation of string numbers, number pairs, and their associated Akkadian names 156

Preface

The origin, purpose and frame of reference of this book

This book has its origin in ideas briefly sketched in my book *Music in Ancient Judaism and Early Christianity* (Ashgate, 2011; reissued in paperback by Routledge, 2016) and subsequently developed in my chapter 'Music' in the Second Edition of *The Early Christian World*, edited by Philip Esler (Routledge, 2017), and in two articles in reference works (Smith 2017b, 2020). Its twofold aim is to explore the relationship between music and religious cults of the ancient Near East, and to approach an understanding of the idiom of the music itself.

'Ancient Near East' is a term used by historians of ancient western Asia to designate the vast geographical area of western Asia between the mountains of southwestern Iran and the Mediterranean Sea, during the period from roughly 8000 to 300 BCE. The peoples of that region were many; their territorial boundaries subject to change and not always clearly defined. Their cultures were individual and diverse and were marked by strong adherence to varied patterns of familial, social and ideological traditions.

Despite cultural diversity, there was also a measure of cultural unity. The ancient religious cultures, in particular, displayed a considerable number of correspondences and similarities across territorial boundaries. In some cases, those correspondences and similarities manifested themselves in close parallels. While there is rarely sufficient evidence to prove that such parallels were the result of direct influence, the very existence of the phenomenon suggests the presence of an underlying common core of religious culture.

Music was part of that religious culture. Indeed, there is clear evidence that music was associated with many types of cultic activity common to religious cultures throughout the Near East in antiquity. In this book, insights from ancient archaeological, iconographic, written and musical sources, as well as from modern scholarship, are brought together to illuminate the subject and to reveal something of the variegated sound-world of Near Eastern cultic music. Details of the particular chronological span and geographical area covered by the book are given in Chapter 1.

The chosen point of departure for most of the discussions in the book is the religious culture of ancient Israel and Judah. This is not meant to reflect value

judgements about the importance or status of ancient Israelite religion compared with other religions of the ancient Near East. The choice is motivated simply by two practical considerations. One is that information about ancient Israelite and Judahite religious culture in ancient sources is more comprehensive and more connected than is the case with other ancient Near Eastern religions, with the possible exception of ancient Egyptian religion. The other consideration is that a large quantity of the ancient literary source material about ancient Israelite and Judahite religious culture is contained in the Hebrew Bible/Old Testament and its closely related ancient literature, authoritative versions and translations of which – especially of the Hebrew Bible – are readily available and therefore likely to be familiar to a wide readership. Thus, this book looks out, as it were, across the whole of the ancient Near East from its vantage point in the southwestern Levant.

Bibliographical context

An enormous amount of serious literature about the ancient Near East has been published since scientific archaeological explorations of sites in Egypt and Mesopotamia began in the early nineteenth century. Nevertheless, there has hitherto been no monograph dedicated to music and religion in the region. This is surprising considering the coverage that has been given to topics concerned with ancient Near Eastern religions on the one hand, and what has come to be called archaeomusicology on the other. It is all the more surprising since a large quantity of the written material extant from the Near East, and a substantial proportion of the archaeological and iconographic remains, have to do with religion in one way or another.

Of course, there are published works which provide broad studies of ancient Near Eastern culture, some of which make comparisons with what is known of ancient Hebrew culture as described in the Hebrew Bible and its related ancient writings (e.g. ANET; Chavalas and Younger 2003; Arieti 2017). However, none has a musical focus. There are also works which describe aspects of ancient Near Eastern religions, many of which make comparisons with ancient Hebrew religion. Works concerned with ancient musical instruments, which may seek to clarify ancient terminology to do with instruments and instrumental music, which describe the involvement of music in ancient rituals and which explain how music establishments were administered in individual religious cults in the ancient Near East, have become increasingly common. But all these are generally limited in scope, if detailed in content. The relationship of their subject matter to the wider field outside their chosen parameters is typically of secondary importance. Many such works are journal articles and chapters in various kinds of symposia such as conference proceedings, *Festschriften* and multi-authored academic volumes presenting the findings of up-to-date research on chosen topics. They are exemplified by many of the entries in the bibliographies throughout this book. The last of the kinds of symposia just listed have become popular as knowledge of the ancient Near East has increased and the scope for

specialised, narrowly focused scholarship has become greater. But while they, as well as *Festschriften* and conference proceedings, are rich sources of expert knowledge and opinion on thematically related topics, they do not present digested overviews. They are rather collections of scholarly articles each of which is complete in itself but related only nominally.

The atomisation and compartmentalisation of knowledge is especially noticeable in scholarly work published since the beginning of the twenty-first century. The work itself represents an upsurge of interest in the ancient Near East, and is facilitated by the online availability of a large quantity of primary source material, including substantial digital archives of ancient written documents, and images of archaeological and iconographic remains.[1] Many older, historically significant secondary sources are now also available online.[2] The advent of e-books, together with the online publication of journal articles and reference works, has given breadth of dissemination and immediacy of access to scholarly publications.[3] It may not be accidental that this upsurge of interest has coincided with the depredations of wars and other violent action in the Middle East, which have resulted in the collateral destruction – in some cases deliberate – of remains from ancient Near Eastern culture. Society has been made starkly aware of the fragility of the material evidence of its historical past. There is now pressure to document, record and archive what we still have, against possible future destruction. Nevertheless, while the upsurge of interest in the ancient Near East is a welcome development, the easy access to large quantities of data has created a situation in which the trend towards narrowly focused, detailed scholarship has increased. There is now a growing need for synthesis. It is my hope that this book, in presenting the first extended study of Near Eastern music in religious cults, might go some way towards satisfying this need.

Method of approach and treatment of sources

The method of approach adopted here is interdisciplinary and predominantly comparative. A comparative approach to the study of cultures so far removed in space, time and mindset from modern Western culture (which is the standpoint from which this book is written, and probably the standpoint of the vast majority of its readers) encounters several problems. Ancient written sources are not always sufficient to provide continuous history. They are sometimes dislocated in time and physical context, sometimes incomplete through partial loss or material damage and sometimes presented in languages and dialects which are not yet fully understood. Literary genres and styles do not always match across cultures. Taking account of the problems is essential if objectivity is to be achieved and maintained, and wrong conclusions avoided. Careful evaluation of written sources in their own contexts is a necessary preliminary to deciding whether, or to what extent, comparisons are valid.[4]

Architectural and iconographic remains also need to be carefully evaluated if meaningful intercultural comparisons are to be made. Architectural remains present some of the greatest discrepancies from civilisation to civilisation and

culture to culture. The extant remains of ancient Egyptian temples and tombs, for example, are unrivalled in the ancient Near East in their number, their state of preservation, the quality of their workmanship, the quantity and diversity of their pictorial and other iconographic material, and their opulence. Elsewhere in the Near East, the remains of monumental buildings are often little more than time-ravaged ruins, where piles of mud-brick or stone rubble and barely visible foundations are all that is left of their once awe-inspiring glory. Modern technology, combined with increasingly deeper understanding of the principles of ancient architecture and the properties of ancient building materials, has permitted some reasonable, although partly conjectural, restorations. These too need to be carefully evaluated. The developing science of archaeoacoustics may in time be able to provide information about the likely acoustic properties of ancient architectural structures in the ancient Near East (Eneix 2014, 2016a, 2016b; Till 2014).

All types of extant remains from Near Eastern antiquity are almost exclusively the products of society's elites: royalty and courtiers, government administrators, military commanders and their high-ranking officers, and the priests, scribes, administrators and craftsmen of organised religion. They rarely provide any significant information about the lives of ordinary people. It is consequently unlikely that there is anything to be learned from them about music at a popular level.[5]

Directly related to the above remarks are two ever-present dangers – one might almost say temptations – to be aware of when making comparisons across ancient cultures. One is to regard examples of intercultural commonality as automatically implying historical connection. Given the state of the sources and our present knowledge of them, there is rarely sufficient evidence to establish directions of influence or lines of historical development. On occasion, a phenomenological similarity across cultural boundaries may appear so strong that the existence of a connection seems the only reasonable explanation for it. But unless there is evidence strong enough to support that explanation beyond doubt, phenomenological similarities must be regarded as circumstantial, and any supposed connection as hypothetical.

The other danger, a corollary of the first, is of building unwarranted constructions out of too little evidence. It is natural for humans to want closure; it satisfies our sense of order to see loose ends tied, a chain of events neatly linked, a line of reasoning followed to a logical conclusion. However, where ancient civilisations and cultures are concerned it is sometimes the case that we do not have sufficient knowledge to form the complete picture we would so like to see. It is important to recognise this limitation for what it is and to be open about what is not known as well as what is known. It is only in such a climate of integrity and openness that research can move forward meaningfully.

A working definition of music

An unusually basic working definition of 'music' is adopted in this book. In order to discuss ancient Near Eastern music objectively from a standpoint in the

modern Western world, and with the least possible danger of imputing to the older culture musical values that belong to the modern one, it is necessary to adopt a definition that is broad enough to be serviceable for both cultures equally. Accordingly, the definition adopted here is that music is sound organised by human beings.

The 'sound' is that which is produced by musical instruments and the human voice. A 'musical instrument' may be construed here as meaning any medium, other than the human voice, which is used by humans to produce sound. That the sound is 'organised' implies that it is produced deliberately, for a purpose. Sound may occur at specific pitches or not. Sound not at specific pitches may nevertheless be experienced as relatively high or low. Noise also falls within the definition, provided its occurrence is not accidental. The definition purposely avoids any suggestion of aesthetic, associative, emotive or qualitative values.

There are no music examples in this book. At present, our knowledge of music theory in the ancient Near East has generated many hypotheses about the sound of the music, but is insufficient to support authoritative transcription. Added to this, staff notation, used by all who have so far attempted transcription, is a misleading, anachronistic and thus inappropriate means of representing Near Eastern musical values (see Chapter 7). In these circumstances, it has seemed best to rely on verbal description alone.

Notes

1 Digital archives of ancient Near Eastern written documents: e.g. CDLI (and additional resources at Penn State University Libraries, Ancient Near East, Ancient Texts); DEU; ETCSL. Digital image archives of ancient Near Eastern archaeological and iconographic remains: e.g. Oriental Institute of the University of Chicago; British Museum Resources for Middle East Studies; Louvre Museum, Department of Near Eastern Antiquities.

2 Historically significant secondary sources online: e.g. The Howard Carter Archives at The Griffith Institute, University of Oxford (see Chapter 4, n.7); Hickmann 1949 (see Chapter 4, References); Layard 1853 (see Chapter 5, References).

3 Important relevant reference works, in addition to large multivolume music encyclopedias (e.g. MGG Online and Grove Music Online): *The Assyrian Dictionary of the Oriental Institute of the University of Chicago* (Reiner and Roth 1956–2011), *The Pennsylvania Sumerian Dictionary* (Sjöberg et al. 1974–) and the *Reallexikon der Assyriologie und vorderasiatischen Archäologie* (various eds, most recently Streck et al., 1922–2017).

4 With regard to the application of comparative method to the interpretation of ancient Near Eastern texts, problems have been identified and discussed, and guiding methodological principles formulated, by Talmon 1978: 320–356; reprinted in Greenspahn 1991: 381–419 and, more recently, Averbeck (Chavalas and Younger 2003). Averbeck adopts the essential elements of Talmon's 'principles', which he summarises as follows: (a) proximity in time and place; (b) priority of inner parallels; (c) correspondence of social function; and (d) a holistic approach to texts and comparisons.

5 Studies of ancient Near Eastern household religion also have to rely on source material from, and concerned with, elite or semi-elite environments. The sources do not provide any concrete musical information. See, for example, Bodel and Olyan 2012 and Albertz et al. 2014.

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Author's note

The following conventions are observed in this book.

General

Each main section of text is numbered to facilitate cross referencing.

Biblical references

The separator for chapter number and verse number is a point: e.g. Genesis 11.22.

The separator for non-consecutive verse numbers is a comma plus space: e.g. Genesis 11.22, 25, 29.

A span of verses is shown by the two delimiting verse numbers separated by an en rule: e.g. Genesis 11.22–29.

A span of chapters is shown by the two delimiting chapter numbers separated by an en rule: e.g. Genesis 11.22–15.7.

Verse numbers added in square brackets to a biblical reference are those of the printed editions of the Hebrew or Greek source where they differ from the English translation.

Signs and symbols

§ flags an internal cross-reference to a numbered section of text

⌞ ⌟ enclose text in quoted matter to which an immediately following bracketed comment applies; used only when more than one word is the subject of the bracketed comment

{} used in quoted translations to enclose my interpolations as distinct from translators' own interpolations

Proper names

Names of people and places in antiquity, and titles of ancient literary works, use the normal English language conventions to the extent that such exist. Otherwise, names and titles are those given by translators of works quoted.

Transcription of ancient Near Eastern languages

At present, there is no consensus on the transcription of ancient Near Eastern languages, including Hebrew. The conventions given below are those which are the most frequently used, but readers may meet occasional exceptions.

Words and expressions in Ancient Near Eastern languages are transcribed in modern roman script.

Ancient Akkadian, Egyptian, Greek and Hebrew are transcribed in *italic*.

Ancient Sumerian is transcribed in **bold**.

Diacritical marks are used with conventional roman or italic letters to signal sounds foreign to, or not necessarily in general use in, English. These are (with approximate pronunciations):

ā	*ā*		long *a* as the *a* in *father*
ĕ	*ĕ*		short *e* as the *e* in *egg*
ē	*ē*		long *e* as the *è* in French *brèv* (in transcription from Greek it stands for the letter *eta*)
ĝ	*ĝ*		as the *ng* in *song* (sometimes transcribed ng/*ng*)
ḫ	*ḫ*		as the *ch* in Scottish *loch* (sometimes transcribed kh/*kh*)
ḫ̲	*ḫ̲*	Ḫ	as the *j* in Spanish *Julio* (sometimes transcribed kh/*kh*)
ī	*ī*		as the *i* in French *petit*
ô	*ô*		as the *o* in *over* (in transcription from Hebrew it stands for the combination *vav+holam*)
ō	*ō*		as the *o* in *over* (in transcription from Greek it stands for the letter *omega*)
š	*š*	Š	as the *sh* in *ship*
ṣ	*ṣ*	Ṣ	as the *ts* in *hats*
ş	*ş*		as the *sh* in *ship*
ṭ	*ṭ*		a sharp, emphatic dental *t* similar to the *t* in *tick*
û	*û*		as the *u* in *flute* (in transcription from Hebrew it stands for the combination *vav+dagesh*)
ū	*ū*		as the *u* in *flute*
ȝ	*ȝ*		Egyptological long *a* as the *a* in *father* (sometimes written ꜣ or ȝ)

Two sounds not normally represented in written English are:

ʾ	the glottal stop
ʿ	the pharyngeal voiced fricative

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Abbreviations

ADOI (1958)	Oppenheim, Leo A., Reiner, Erica, et al. (eds) (1958) *The Assyrian Dictionary of the Oriental Institute of the University of Chicago*, vol. 4, *E*. Chicago, IL: The Oriental Institute. Sixth Printing (2004).
ADOI (1992)	Reiner, Erica, Biggs, Robert D., Roth, Martha T., et al. (eds) (1992) *The Assyrian Dictionary of the Oriental Institute of the University of Chicago*, vol. 17, *S* [*Shin*], Part 3. Chicago, IL: The Oriental Institute. Second Printing (2008).
ANET	Pritchard, James B. (ed.) (1969) *Ancient Near Eastern Texts Relating to the Old Testament*. 3rd edn with supplement. Princeton, NJ: Princeton University Press.
ARANE	Dumbrill, Richard, and Marcetteau, Myriam (2009) *Archaeomusicological Review of the Ancient Near East*. London, UK: ICONEA Publications.
BCE	Before the Common Era
BDB	Brown–Driver–Briggs. Brown, Francis, Driver, S. R., and Briggs, Charles (eds) (1906/2005) *Hebrew and English Lexicon: With an Appendix Containing the Biblical Aramaic*. Boston, MA: Houghton, Mifflin & Company. Reprinted [in 2005] from the 1906 edition, with corrections and the addition of word numbering from Strong's Exhaustive Concordance. Ninth Printing. Peabody, MA: Hendrickson Publishers.
CDLI	Cuneiform Digital Library Initiative. A joint project of the University of California, Los Angeles, the University of Oxford, and the Max Planck Institute for the History of Science, Berlin. Online at: https://cdli.ucla.edu/2019.
CE	Common Era
DEU	Digital Egypt for Universities. Grajetzki, Wolfram, Quirke, Stephen, Shiode, Narushige, et al. (eds) (2000–2003) London, UK: University College London. Online at: www.digitalegypt.ucl.ac.uk/Welcome.html.
ETCSL	The Electronic Text Corpus of Sumerian Literature. Black, J. A., Cunningham, G., Ebeling, J., Flückiger-Hawker, E.,

Robson, E., Taylor, J., and Zólyomi, G. (eds) (1998–2006) Oxford, UK: Faculty of Oriental Studies, University of Oxford. Online at: http://etcsl.orinst.ox.ac.uk/. Website updated 30 November 2016; upgraded 2017. The project ended in 2006 but the website is still maintained.

HB — Hebrew Bible. Cited according to the edition of Kittel, R., Kahle, P., Eissfeldt, O., Bardtke, H., Rüger, H. P., Elliger, K., Rudolph, W., Weil, G. E., and Thomas, D. W. (1977) *Torah, Nevi'im u-Khetuvim = Biblia Hebraica Stuttgartensia*. Stuttgart: Württembergische Bibelanstalt.

Bible translations in English which include translation of the HB:

ESV	2011
KJV	King James Version [of the Bible] (1611)
LEB	Lexham English Bible (2012)
NEB	New English Bible (1961, 1970)
NIV	New International Version [of the Bible], 2011.
NJPST	New Jewish Publication Society Tanakh. New translation of the Tanakh (the Hebrew Scriptures) published by the Jewish Publication Society of America. Second edition (1999).
NKJV	New King James Version [of the Bible] (1982)
NRSV	New Revised Standard Version [of the Bible] (1989)
REB	Revised English Bible (1989)
RNJB	Revised New Jerusalem Bible (2018)

HCBD — HarperCollins Bible Dictionary. Powell, Mark Allan (general ed.) (2011). Revised and updated. Society of Biblical Literature. New York, NY: HarperOne.

HCSB — HarperCollins Study Bible. Cited according to *The HarperCollins Study Bible Revised Edition* 2006. New York, NY: HarperOne, 2006. [Uses the text of the NRSV (1989).]

ICONEA — *International Conference of Near Eastern Archaeomusicology (2007–2010)*

Illus. — Illustration(s)

KAR — *Keilschrifttexte aus* Assur *religiösen Inhalts*. Ausgrabungen der Deutschen Orient-Gesellschaft in Assur, E: *Inschriften*, ed. Friedrich Delitzsch. 2 Band. Leipzig: J. C. Hinrichs, 1919–1921

KV — Valley of the Kings, Egypt

LXX — Septuagint [early Jewish Greek translation of the Hebrew Scriptures]. Cited according to the edition: Rahlfs, Alfred (1935) *Septuaginta: Id est Vetus Testamentum graece iuxta lxx interpretes*, 2 vols. Stuttgart: Württembergische Bibelanstalt Stuttgart.

MIMO	Musical Instrument Museums Online project (2011). Online at www.mimo-international.com/documents/Hornbostel%20Sachs.pdf.
n.	note
NABU	*Nouvelles Assyriologiques Brèves et Utilitaires*. Société pour l'étude du Proche-Orient ancien (SÉPOA). Online at: http://sepoa.fr/?page_id=14.
NETS	*New English Translation of the Septuagint*. Pietersma, Albert, and Wright, Benjamin G., (eds and trans) (2018). Edition 3.7. Oxford UK: Oxford University Press (first edition published 2007).
p./pp.	page/pages
PG	Private Grave
Pl.	Plate(s)
RAVA	*Reallexikon der Assyriologie und vorderasiatischen Archäologie*. Michael P. Streck et al. (eds) (1922–2017). Bayerische Akademie der Wissenschaften, Berlin; München 2019.
SP	Samaritan Pentateuch. Cited according to the edition: Shoulson, Mark (2008) *The Torah: Jewish and Samaritan versions compared.* Second Edition. Cnoc Sceihin, Leac an Anfa, Cathair na Mart, Co. Mhaigh Eo, Éire: Evertype. English translation: Tsedaka, Benyamim (ed. and trans.; co-ed. Sharon Sullivan) (2013) *The Israelite Samaritan Version of the Torah: First English Translation Compared with the Masoretic Version*. Grand Rapids, ML, and Cambridge, UK: Eerdmans.
TT	Theban Tomb
UET	*Ur Excavations Texts* (1928–2006). Series. Nine vols to date (vols 6 and 8 have three and two separate parts, respectively). Various editors. Publications of the British Museum and the University of Pennsylvania. London, UK, and Pennsylvania, PA: Oxford University Press for the Trustees of the British Museum and the Museum of the University of Pennsylvania (publication details of individual volumes may vary).

1 Introduction

1.1 The ancient Near East as treated here

In the present book, the term 'ancient Near East' (often shortened to 'Near East') refers to the geographical area that extends eastward from the lands bracketing the eastern end of the Mediterranean Sea to the Zagros Mountains beyond the Tigris and Euphrates rivers, during a period of antiquity stretching from approximately 3000 to 550 BCE (compare Kuhrt 2005: 1–16; Liverani 2014: 1–33; Podany 2014: 6–15; Van De Mieroop 2015: 1–4, 6, 7–10). It is regarded as comprising the Levant, Anatolia, Mesopotamia and Elam, and Upper and Lower Egypt, and corresponds roughly to the area covered collectively by modern Turkey, Lebanon, Israel/Palestine, Egypt (its Mediterranean hinterland, the Nile Delta region, and the Nile Valley), Syria, Jordan, Iraq, and southwestern Iran. The Arabian Peninsula (comprising modern Saudi Arabia, the Yemen, Oman, and the United Arab Emirates), all except the coastal areas of which is mostly desert, is not normally included in discussions of the ancient Near East. Some writers also prefer to exclude Egypt for reasons of contextual focus (e.g. Podany 2014: 6–7; Van De Mieroop 2015: 1; compare Kuhrt 2005: 1–6; Liverani 2014: 8).

The historical period covered here corresponds roughly to the span of time from the beginning of the Bronze Age to the end of the Iron Age. It encompasses the rise and fall of many great empires and dynasties, including those of the Sumerians, the Akkadians, the Persians, the Assyrians, the Hittites, the Phoenicians and the Egyptians. It also saw the blossoming of Mesopotamian and Levantine civilisations, and within the latter the pre-exilic period and most of the exilic period of ancient Israelite history.

The beginning of the Bronze Age is significant as the time from when meaningful quantities of relevant primary source materials start to appear. The end of the Iron Age, on the other hand, is significant in that it marks a watershed in the history of the ancient Near East, not in terms of the development of material culture, but rather on account of relatively rapid changes in the ways in which political and ideological powers became dominant in the region. History's perception of the significant characteristics of that time of change is reflected in the names it has bestowed on the periods which comprised it: the Neo-Babylonian period, the

Persian period, the Hellenistic period and the Roman period. The first three of those periods were initiated within the space of some 250 years, the fourth some 200 years later. In most cases, the periods overlapped to a greater or lesser extent, and none entirely obliterated the marks of the others, or indeed of what had existed before them.

To extend the study of music and religious cults into the era after the end of the Iron Age would require a very different methodological approach from the one adopted here, and would ideally be best served by a separate book. The chronological scope of the present work is therefore limited (but with some flexibility) to a period which permits a reasonable degree of straightforward oversight despite the continually increasing amount of knowledge that becomes available.

1.2 Religion in the ancient Near East

1.2.1 Religion as culture

The peoples of the ancient Near East and its neighbouring lands had no concept of religion as an intellectualised system of belief.[1] For them, that which in modern post-Enlightenment Western thought is understood as 'religion' embodied their whole culture: their ancestry, their history as indigenous peoples (as foretold in their traditional myths and narratives), and their real-time material, social and spiritual existence. It is doubtful whether they would have had any appreciation of religion as a discrete and optional element in society.

Deities were intrinsic to ancient Near Eastern cultures. Myths and traditions about them abound in all manner of ancient writings and iconography. Deities were conceived of as real and dynamic; they commanded, supported and guided human beings in return for worship, appeasement and obedience. They also punished (sometimes harshly, and sometimes apparently capriciously), corrected and redirected when human behaviour strayed beyond the accepted norms.

The ancient myths show that the deities were thought of as being like human beings in that they could love and hate, show joy and anger, marry and procreate. Anthropomorphism also found expression in iconography: deities were portrayed typically as fantastic hybrid human–animal, or human–bird, figures. But deities were also regarded as being superhuman in that they could disappear and reappear at will, transform themselves, and transcend distance and time. They could create and destroy, they could give life and take it. While most deities were perceived as benevolent, some were regarded as chthonic, dwelling in the 'underworld' and having malevolent intentions towards humans.

The deities were deemed to have established the accepted norms of conduct for all political, spiritual, social, moral and ethical aspects of human life, to the extent that there was no concept of 'sacred' versus 'secular'. The separation of military activity, civil administration, commerce and politics from religion and religious practice, which is normal in modern Western culture, simply did not exist in the Near East in antiquity. A decision to engage in warfare, for example,

whether proactively or defensively, was subject to the approval of the gods. Success in battle was seen as a consequence of divine help, and was interpreted as a mark of divine approval; failure was seen as divine withdrawal in disapproval. And further, at major festivals at local temples, prostitution was practised as a celebration of the supposedly divine gift of procreation. If a distinction could be drawn between religious and non-religious elements in ancient Near Eastern culture, it was between 'sacred' and 'profane', where the former was exemplified by all that the deities were deemed to have willed for humans down through the ages and up to and including the present, and the latter by humans' wilful disrespect for the will of the gods and society's accepted norms.

1.2.2 Theology: monotheism, polytheism and syncretism

1.2.2.1 Introduction

The theology of the ancient Near East was predominantly polytheistic and syncretistic. Despite the biblical tradition which promotes *YHWH* as the sole deity of Israel and Judah, and the 17-year period in Egyptian history when worship of the deity Aten alone was forced upon the nation,[2] monotheism and monolatry were exceptional in the context of Near Eastern religion as a whole.

Deities were of various types. The ancient Israelites' deity worshipped at the Jerusalem Temple was by tradition incorporeal and invisible (§1.3.2.2). In Mesopotamia and Egypt, deities could include living and deceased pharaohs and rulers as well as mythological personages. In Anatolia and Mesopotamia, artefacts, including musical instruments, could be deified or divinised. In ancient Israelite religion as expressed in the Hebrew Bible, there was no doctrine of divine kingship. Kings were subordinate to the deity; they were not regarded as divine, and they were not worshipped. Although the deity is described and referred to in royal terms in many places in the HB (especially in poetic passages concerned with dignity, magnificence and power), such descriptions and references are not expressions of a theological equality of deity and monarch. Rather, they are metaphors which make use of images of the dignity, majesty and power of kingship to express the greatness of the deity.[3]

1.2.2.2 Levant

In the northern Levant, the large Late Bronze Age corpus of cuneiform texts on tablets from ancient Ugarit (modern name: Ras Shamra), located on the northeastern Mediterranean coast in what in antiquity was the southeastern corner of the Hittite empire (now in modern Syria), has revealed the names of 234 deities. Some 178 of them are named as the recipients of sacrificial offerings. Many of those deities' names (or their Canaanite and Hebrew variants) also appear in the HB. Many of the deities named would have belonged, together with *YHWH*, to the general corpus of deities worshipped in the Levant in the Late Bronze Age and the Iron Age (Pardee 2002a: 12–24, 222; Hess 2009: 95–112).[4]

The HB gives some idea of the multiplicity of deities worshipped in the south-western Levant in addition to *YHWH* (e.g. Miller 2000; Hess 2009). The divine name *ʾelohim* (Elohim) frequently encountered in the HB and usually translated 'God' in English bibles (and regarded as referring to the deity of the Israelites) is the plural form of the divine name *ʾel* (El). El was the generic name for 'god' throughout the Near East in antiquity, but was also the name of the chief deity in the pantheon of Canaanite gods. El could have various 'personas', for example: *ʾel ʾelyôn*, *ʾel shadday*, *ʾelôah* and, of course, *ʾel* himself, all of which are referred to in the HB. The literal meaning of the plural form *ʾelohim* is 'gods' and is used to refer collectively to the 'personas' of El. The names of those personas probably originally signified individual deities.[5] Similarly, elsewhere in the HB, the divine name *baʿaliym* (Baals) (e.g. HB Judges 2.11) is the plural form of *baʿal*, the name of the storm and fertility god Baal, and is used to refer collectively to his various 'personas'.

The Moabite god Chemosh, the Ammonite god Milcom/Molech, as well as other deities, were worshipped at elevated locations near Jerusalem (HB 1 Kings 11.7–8).[6] The goddess *ʿasherah* (Asherah, the consort of El in Canaanite and Ugaritic mythology) is mentioned several times in the HB as an object of worship, and was known under variant names, including plural forms, for example: *ʿasherah* (singular), *ʿashtaret* (singular), *ʿashtoret* (singular), *ʿashtarôt* (plural) and *ʿastarôt* (plural).[7] The HB mentions three instances of Israelites worshipping images of calves, symbols of youthful vigour and strong leadership (HB Exodus 32.1–5; 1 Kings 12.25–33).[8]

Archaeological finds provide further evidence of polytheism in the Levant. The discovery of a small, well-preserved bronze figure of a calf in the remains of a Late Middle Bronze Age stratum of the city of Ashkelon (Hess 2009: 136, 155–156) is of interest in relation to the instances of the Israelites' worship of images of calves, referred to above. At Tel Haror, a Late Middle Bronze Age city in the northern Negev, west of Beer-sheba, a red painted arm was unearthed, probably belonging to the statue of a deity (Hess 2009: 137), and other possibly relevant finds (Oren 1997). Among Late Bronze Age remains from Beth-shean is the depiction of a deity, perhaps the warrior-goddess Anat (Hess 2009: 138). At Shechem, a bronze figure of a Canaanite god was found among the Iron Age I remains (Wightman 2007: 164, 165, Plate 3.3; Hess 2009: 133, and n. 19).

Evidence suggesting the worship of a plurality of deities at individual locations comes from three sites. In the tenth-century BCE stratum (Iron Age II) at Megiddo, the find of duplicated cult items suggests that two deities could have been worshipped there (Wightman 2007: 190; Hess 2009: 299). Evidence from eighth-century BCE levels of excavation in Iron Age II Arad points to the worship of two deities there also, one of whom is likely to have been *YHWH* (Wightman 2007: 187–189 with Figure 3.18 and Plate 3.7; Hess 2009: 283, 303–304). Inscriptions discovered at the third site, Kuntillet ʿAjrud, an Iron Age II site on the Negev–Sinai border, are said to consist of 'requests, prayers and blessings to and by "Yahweh of Teiman and his

Ashera," "El," and "Baal,"' and a blessing formula '"By Yahweh of Samaria and his Ashera."' Close to the inscriptions, on the same surfaces, are drawings of humanoid figures which are also relevant (Hess 2009: 283–289, 307; Meshel 2012; see below).

The strong Egyptian presence in the Levant, especially during the 300 years or so from *c.*1500 BCE when the Levant was part of the Egyptian empire, inevitably left its mark on the Levantine theological landscape. Examples from three sites will serve as illustrations. One is Shechem. The Amarna correspondence (fourteenth century BCE) includes a letter written from Shechem in about 1350 BCE by Labaya, the then governor of the city, to the pharaoh in Egypt. The letter seems to equate its author's father (or ancestor) with his god, thereby suggesting that ancestor worship, which was prevalent in Egypt, may also have been practised in Shechem.[9] Another site is Lachish, where a gold plaque found in the remains of the Late Bronze Age temple on the city's tell carries an Egyptian-style depiction of a naked female standing on the back of a horse. The depiction is thought by some to represent the goddess Astarte (Pinch 2004: 18, 108–109; Hess 2009: 322; Wilkinson 2010: 313). In addition, an inscription naming the god Reshef (Helck 1971: 450–454; al-Nubi 1997: 165–166; Bresciani 1997: 233, 239–240; Hess 2009: 101), and a drawing supposedly of him, have been found on a Late Bronze Age ewer (*c.*1220 BCE) from one of the fosse temples at the bottom of the tell (Hess 2009: 134–135, 238 and literature). Astarte and Reshef were originally Syrian deities. From the Middle Bronze Age II, they were venerated in Egypt whence they entered Canaan with the Egyptian imperial expansion into the Levant. The third site is Kuntillet ʿAjrud. From this site come depictions of two standing humanoid figures in drawings close to the 'Yahweh and Ashera' inscriptions referred to above, which have been identified as representations of the Egyptian deity Bes (Hess 2009: 319–320). Bes and his female counterpart Beset have been characterised as 'protective dwarf deities closely associated with childbirth and rebirth' (Pinch 2004: 118–119).

1.2.2.3 Anatolia

In ancient Anatolia, in the city of Hattusa, the capital of the Hittite empire, there were some 30 temples, which suggests the veneration of a similar number of deities there (see §1.3.2). However, the number of venerated deities is likely to have been higher since many of the 234 Hittite deities may have been common to Anatolia (§1.2.2.2, first paragraph), and in western and eastern Anatolia there was considerable syncretism as a result of interaction with adjacent Greek and Mesopotamian cultures, respectively (Steadman and McMahon 2011, 2016; Roller 2012).

1.2.2.4 Mesopotamia

Mesopotamian deities were especially numerous in antiquity. Estimates based on Mesopotamian god-lists, and filtered by various criteria, have ranged from approximately 300 to 3,300, with a consensus settling on a mean figure of

around 2,400 (Bottéro 2001: 45; Mark 2011; Schneider 2011: 51–52). Arriving at any realistic estimate is probably impossible on account of the enormous span of time encompassed by the counts (deities came and went; not all of them were venerated all the time), and the prevalence of syncretism, which sometimes resulted in different names and epithets being used for essentially identical deities venerated in different locations at different times, or when fulfilling different roles (Bottéro 2001: 44–57; Schneider 2011: 51–65).

1.2.2.5 Egypt

Ancient Egyptian deities were probably considerably fewer than Mesopotamian ones, although their number is difficult to estimate in view of problems similar to those encountered in counting Mesopotamian deities. The problems are compounded in the case of Egyptian deities by the frequent grouping of several different deities under one name and the lack of god-lists. A recent source estimates 'more than 1,500' deities, and lists 122 of the most common ones.[10]

1.2.3 Worship

The principal acts of organised worship in the ancient Near East were the rites of offering and sacrifice to deities (and deified artefacts in Mesopotamia), performed at altars in temples and other cultic sites. In Anatolia and Mesopotamia, worship tended to be localised to individual city states and centred round patronal deities. Performance of the rites was delegated by the local ruler to the local priesthood. Local rulers might nevertheless occasionally preside at the rites. In Egypt, the sacred images (the cult objects) were not the deities themselves, but effigies or symbols of them. The sacred images were physical media through which the deities could be approached. The deities were worshipped *via* the images, as it were (Teeter 2011: 39–46). In Israel/Palestine and Judah, the one deity was invisible and without physical form. His presence was symbolised in the temple by an ornate sacred chest (§1.3.2.2). Worship was offered before that object, as if to the deity. Royal presidency at the rites is occasionally noted in the HB.

The cuneiform texts of the Ras Shamra tablets show that the purposes of sacrifice there were manifold, and it is unlikely that the picture was appreciably different in Canaan and the remainder of the Levant. High on the list of purposes was the marking of days, months and seasons. This was certainly the case at the Jerusalem Temple and at the temples of Egypt. Propitiation of the deities was also important. Animal sacrifices were thought of as food for the deities, libations of wine as drink for them. Other purposes included intercession for good health and general well-being, and marking the transition from life to death (Pardee 2002a: 25–96, 117–121, 226, 2002b).

Sacrificial offerings might consist of animals, birds, non-animal agricultural produce, and products made therefrom such as bread, cakes, wine and incense. In Anatolia, Mesopotamia and Egypt, offerings could also consist of artefacts.

Sacrifices in which portions of the offerings of slaughtered livestock were wholly or partly consumed by fire on an altar ('burnt offerings') were common. Human sacrifice, including child sacrifice (Arbel et al. 2015; Dewrell 2017), was not unusual. Its acceptance among the Hebrews as something their deity might require is implied by the biblical stories about Abraham and his son Isaac (HB Genesis 22.1–13) and about Jephthah and his unnamed daughter (HB Judges 11.29–40). The wording of some of the biblical condemnations of the practice implies that it was widespread among both Hebrews and non-Hebrews.[11] In addition, there is archaeological evidence of child sacrifice at Amman and Ashkelon, and of the persistence of child sacrifice among non-Hebrew peoples in many places around the Mediterranean until well into the mid-first millennium BCE. The practice had a long history in Phoenicia, being associated with the god of the underworld known in the HB as Milcom/Molech (Miller 2000: 59; Hess 2009: 132, 136; §1.2.2.2, at and with n. 6).

The sacrificial burnt offering of livestock often fulfilled an important social purpose as a bonding element within the community and between the community and the deity, as well as being an act of worship. In certain circumstances, the ritual was regulated so as to allow what might be termed a 'part-burnt' offering in which a portion of the sacrificial meat was earmarked to be roasted on the altar but not totally consumed by the fire. The roasted meat provided food for the officiants – the priests and their appointed assistants – and was eaten by them (and perhaps their families) communally at the place of sacrifice or in a nearby enclosure or room. In the HB, such a room is referred to as a *lishkah*.

The ancient Anatolians, Mesopotamians, and Egyptians saw it as their duty to care for their deities. The main way in which they did this was to make them offerings of food, drink, clothing, jewellery, incense (for a sweet-smelling environment) and ointment. The offerings were presented before the sacred images in daily rituals at temples. Feeding rituals were performed two or three times each day, at the customary mealtimes; clothing and adorning rituals were performed daily each morning and evening. This was not possible for the ancient Israelites. While their deity could be adored, obeyed, praised and otherwise venerated, he had no physical form that could be fed, clothed and made comfortable.

1.3 Spatial setting of cultic activity

1.3.1 Introduction

Temples and open-air sacred installations were the main types of ancient Near Eastern sacred space at which cultic rites were performed. Their principal architectural and spatial features are described and illustrated below with reference to selected representative examples which give a good general idea of the kinds of physical setting in which cultic worship took place. The large mortuary temples of Egypt are represented here among the temples (Hundley 2013: 18–19),

but individual small mausoleums, tombs and other types of burial chamber, are not. It is true that the latter were places where memorial or funerary rites were performed, sometimes with concomitant music. However, while burial chambers were common throughout the ancient Near East, they were of so many different types, sizes and styles that they defy straightforward classification. Familiar terminology can sometimes give a false impression of what the settings of certain funerary rites were like. For example, whereas in Egypt a pyramid was, or marked the location of, a burial chamber, in Mesopotamia a pyramid was an artificial sacred hill, perhaps with a sacred structure at its base or on its summit, but without any mortuary association (§1.3.2.4). In Hellenistic culture, several structures have in the past been referred to as pyramids when in fact they are more likely to have been monuments or watchtowers. The 'pyramids' at Ligourio (also Lugourio/Lygorio) and Hellenikon in southern Greece, dating perhaps from the fifth to fourth centuries BCE, are cases in point.[12] The sacred space of funerary rites will be taken account of as appropriate in discussions of obsequies.

1.3.2 Temples

In the ancient Near East, every major city had a temple; some cities had several. Temples were the focus of regional and local religious cults. In the larger cities of the great empires, temples were typically monumental buildings of awe-inspiring dimensions. Michael Hundley has observed that ancient Near Eastern temples display a 'remarkable continuity of form and its communicated message … both within and across regions' (Hundley 2013: 131). They show that throughout the vast area from Egypt and Anatolia furthest west to Mesopotamia and Elam furthest east, the idea that a temple was a deity's 'home' was common, and that that this concept was realised in remarkably similar ways. Differences were matters more of size than purpose.

In a temple, the cult object – an effigy or image of the deity, or a symbol of the divine presence – was typically placed innermost in an inner room[13] furthest away from the temple entrance, protected from the outside world (Wightman 2007: 932–933). The room was not a public room; only cultic officiants were admitted, after having undergone the prescribed rites of purification. There they made obeisance to the deity, attended to what were perceived to be the deity's needs, ensured that the room was clean, tended the lamps, presented offerings (artefacts, drink, food, incense) and sacrifices (animal, bird, human), and offered incantations and prayers. The room was dimly lit and in some instances windowless. Illumination might be provided by natural daylight from an open doorway or from lattice windows if there were any, or by light from lamps (see further below). The extreme sanctity of that room was often itself protected by further sacred space through which worshippers and sacred officiants had to pass in order to approach the deity's presence. An exterior courtyard might provide additional liminal sacred space. The physical line of access to the deity was most usually straight along the temple's architectural axis from the entrance

portal or an anteroom, or even in some cases from a courtyard before the temple building itself.

Large temples needed a considerable infrastructure to maintain the fabric and the religious service. Administrators, craftsmen and officiants were generally required to be available throughout each day and were accordingly provided with workrooms, storerooms, offices and living accommodation in buildings in the temple precincts close to or adjoining the temples. Those buildings and the temples themselves formed temple complexes which were typically surrounded by walls, or by courtyards with all-enclosing walls.

The examples of general similarity described above may be supplemented by evidence of what seem to be similar approaches to the process of temple building in Mesopotamia and ancient Israel. Two textual sources are important. One is the extended ritualised Sumerian myth known as 'The Building of Ningirsu's Temple', which is inscribed on the Gudea Cylinders and dates from about 2125 BCE.[14] The other is a text group from the HB, which provides information about temple building and temple architecture in ancient Israel and neighbouring territories. Especially important is the extended narrative of the building of the Jerusalem Temple (HB 1 Kings 5.15–9.25). Comparison of the two sources has revealed many points of correspondence with regard to the logistics, techniques and ethics of temple building (Hurowitz 1992). A subsequent comparative textual analysis of the two sources has identified no fewer than 15 detailed and 7 general textual parallels (Averbeck 2003: 119–121). This is not intended to imply a specific historical relationship between ancient Mesopotamian and ancient Israelite or Levantine temple building, especially considering that the sources cited are separated by more than a thousand years. However, it does suggest that common approaches to building monumental religious structures may have existed in the fertile crescent during a large portion of antiquity. It also serves to underline both Hundley's observations quoted above (§1.3.2, opening paragraph) and the remarks in the Preface about an 'underlying common core of religious culture' in the ancient Near East.

1.3.2.1 Levant

The principal literature dealing with Levantine temples referred to here is (Busink 1970, 1980; Monson 1999; Wightman 2007: 144–197; Edelman 2010; Hundley 2013: 105–129). The best known of the Levantine temples, the Jerusalem Temple, also known as Solomon's Temple, was built in *c.*950 BCE as a permanent dwelling place for the Israelites' deity, and as the centre of Israelite cultic worship (Busink 1970; Monson 1999). There are no extant pre-exilic archaeological remains of the edifice. The earliest sources of information about its physical appearance are traditions preserved in biblical narratives of its erection, decoration and dedication in HB 1 Kings 6–8 (Smith 2011: 33).[15]

According to 1 Kings 6.2, the pre-exilic Jerusalem Temple was a large, rectangular two-room temple measuring '60 cubits long, 20 cubits wide, and 30 cubits high': approximately 27 m (88 feet) long, 9 m (30 feet) wide, and

14 m (45 feet) high (these were probably internal measurements).[16] It likely had an east–west orientation with its entrance at the eastern end (Busink 1970: 165–172, between 174 and 175, 252–253; compare HB Ezekiel 47.1).[17] The most sacred room occupied a square area at the western end, partitioned off from a longroom sacred room.[18]

The ground plan was symmetrically balanced on each side of its longitudinal axis. From the temple's entrance there was a straight line of access to the cult object in the most sacred room, a feature known as direct access. Externally, the temple had adjoining side-rooms and an open-air courtyard with a large altar. Since the biblical text implies that the outdoor altar stood in 'the middle' (*ʾet-towek*) of the courtyard (HB 1 Kings 8.64a), this altar, the temple's entrance, and the cult object in the most sacred room were aligned along the temple's axis. The temple was approached via a porch inside which two columns flanked the entrance itself.

The cult object in the most sacred room was neither a deity nor the effigy of one. For the Israelites and Judahites of the First Temple period (as well as later), and in contrast to other ancient Near Eastern peoples, their deity was by tradition incorporeal and therefore invisible. Although the temple was conceived as a dwelling place for the deity, it was rather the deity's 'name' and his 'eyes and … heart' that were deemed to reside there.[19] During at least the pre-exilic period, the deity's presence in the temple was represented symbolically by a richly decorated wooden chest ('the ark') regarded as the deity's throne (HB 2 Kings 19.15), placed in the most sacred room (HB 1 Kings 6.19).[20] This was the ancient Israelites' cult object. At some later, unspecified time before the end of the exile, the Ark of the Covenant seems to have disappeared permanently from the temple. There is no biblical tradition about the ark after the exile. In the post-exilic Jerusalem Temple, the empty most sacred room was itself the symbol of the deity's presence (HCSB, note to Jeremiah 3.16; Soggin 1993: 75).

Three Levantine temples are noteworthy for having ground plans closely similar to that of the Jerusalem Temple. One is the Late Bronze Age II temple at Hazor (modern name: Tell el-Qedah) in the Upper Galilee region of Israel (Busink 1970: 398–399 with Abb. 100, Stage II; Yadin 1972; Monson 2000: 31 with accompanying photograph; Wightman 2007: 167, Figure 3.10; Hundley 2013: 112–116 with Figure 5.4).

Another is the Iron Age II temple at Tell Taʿyinat (perhaps the site of ancient Calneh/Kinalua) approximately 50 km (31 miles) west of Aleppo (Monson 2000: 22, 31; Wightman 2007: 184, Figure 3.16; Harrison 2009; Hundley 2013: 112–113 with Figure 5.5). When it was discovered in 1935–1938, this temple was thought to have been built contemporaneously with Solomon's great edifice of *c.*950 BCE (Monson 2000: 22). However, archaeological investigations carried out in 2008–2009 have suggested that the temple's building history probably dates from the late ninth or early eighth century BCE, and that the extant remains are indicative of the temple's state in the late eighth or more likely the early seventh century BCE (Harrison 2009: 186). The overall external dimensions (length×breadth) are approximately 17.5×7.5 m (57×24.2 feet) (Harrison 2009: 185).

The third such temple is the Late Bronze Age to Iron Age II temple at Tell Ain Dara, approximately 65 km (40 miles) northwest of Aleppo (Figure 1.1; Monson 2000; Wightman 2007: 193–197 with Figure 3.20; Hundley 2013: 105, 110–114 with Figure 5.3). Extensive excavations in 1980–1985 revealed that the temple had a three-phase building history (Abu-Assaf 1990). In the first (*c.*1300–1000 BCE), the main temple structure was completed; in the second (*c.*1000–900 BCE), small architectural modifications were made internally and to the front facade. In the third (*c.*900–740 BCE), an external 'corridor' (perhaps a series of linked rooms) was added round three sides of the main structure. Outside the front of the temple was a courtyard containing a large chalkstone basin and a ceremonial processional way leading to the temple's main entrance. The ground plan of the

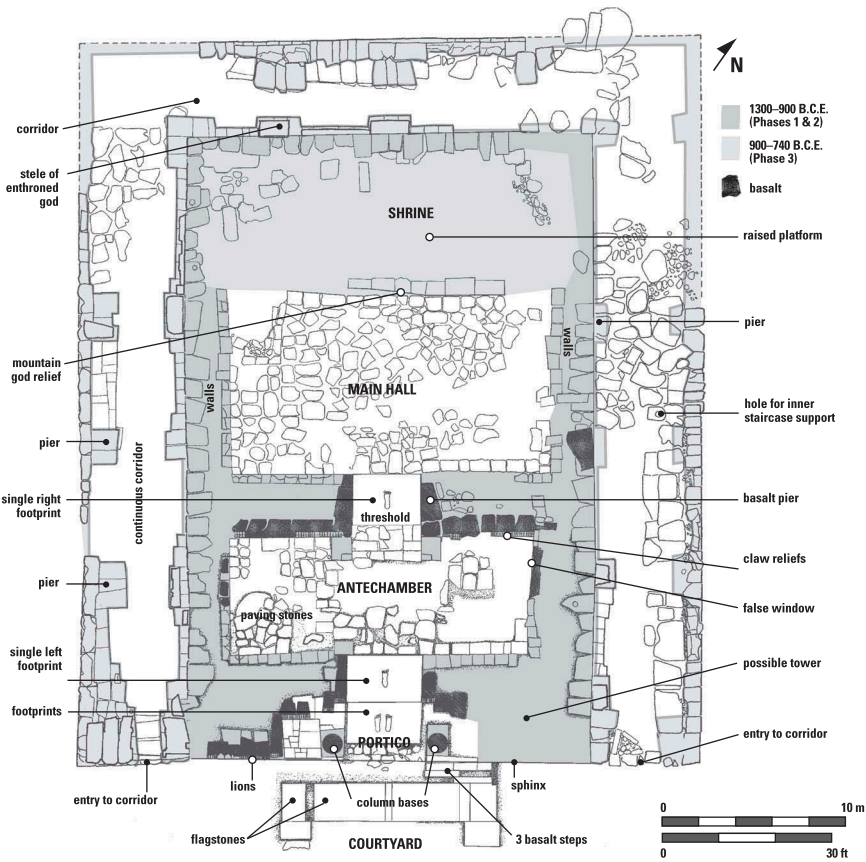

Figure 1.1 Ain Dara Temple. Annotated archaeological ground plan after the third building phase.

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temple itself, excluding the external additions from the third building phase, measures approximately 30×20 m (98×66 feet).[21]

The basic plan of those temples, namely rectangular longroom structures (the longroom perhaps divided laterally, or multiplied) orientated symmetrically, or in balanced proportions, along two sides of a central longitudinal axis, reflects what has come to be regarded as the 'classic' ground plan of temples in Mediterranean and Near Eastern antiquity.

1.3.2.2 Anatolia

Although many Anatolian temples are known, relatively few have been excavated thoroughly (Bittel 1981: 63–73; Wightman 2007: 198–244; Roller 2012; Hundley 2013: 85–103). Of those which have, two may be considered here. One, in Hattusa (modern name: Boğazköy), the capital city of the Hittites, is located in the Lower City and designated Hattusa Temple I. The other is located on the tell at Sarissa (modern name: Kuşaklı) and designated Sarissa Temple I.

Each temple is similarly constructed as a compact rectangular, almost square, architectural unit containing a multiplicity of rooms surrounding a more or less centrally positioned and partly colonnaded courtyard. The result is more a temple complex than a discrete temple structure. The way to the ritual places was typically through a large gateway into the complex, and across a courtyard. While it is possible to identify the most sacred rooms (those innermost, furthest away from the gateway), the purpose and status of the remaining rooms is uncertain.

Hattusa Temple I is orientated northeast to southwest on its longitudinal axis (Wightman 2007: 222, Figure 4.8; 223, Figure 4.9; Hundley 2013: 87–89 with Figure 4.2; 91 with Figure 4.4).[22] The overall ground plan measures approximately 55×38 m (180×124 feet). A massive four-room gateway in the centre of the southwest wall leads into a short, roofed porch with two flanking columns, which gives into a courtyard approximately 28 m long by 19 m wide (92×62 feet). In the innermost right-hand corner of the courtyard is the base of a structure measuring approximately 5×4 m (16×13 feet) which may have been an altar. There is direct access from the gateway, through the porch and across the courtyard to two doorways which give indirect access to what appear to be two separate most sacred rooms. Those rooms, each of which is almost square, are built one on each side of the longitudinal axis. The room to the right of the axis appears to contain the base of a plinth, perhaps for a cult object.

Sarissa Temple I is among several discovered on the tell at Sarissa all of which exhibit similar ground plans. With regard to the temple itself, Hundley draws attention to the location of the most sacred room at right angles to the entrance to the courtyard, and notes the circuitous route by which it would have been approached (Hundley 2013: 90, Figure 4.3 and caption; see also Wightman 2007: 228, Figure 4.11). The entrance is a four-room gateway which leads into the courtyard. The overall dimensions of the foundations are approximately

54×36 m (177×118 feet). This temple dates from between 1800 and 1200 BCE, notably earlier than the Levantine temples discussed above.

1.3.2.3 Mesopotamia

Many temples in ancient Mesopotamia exhibit characteristics of structure, design and setting familiar from both the Levantine and Anatolian temples discussed above (Dalley 1984/2002; Wightman 2007: 1–65; Schneider 2011: 66–78; Hundley 2013: 49–84). Two pertinent examples – one early, the other late – are the temple of Ishtar-Kitītum in Neribtum (modern name: Ischali/Ishchali), built in the period 1950–1850 BCE, and the temple of Ninmakh in Babylon, built in the period 626–539 BCE, respectively.

Each of those temples was part of a temple complex in a unified architectural plan which incorporated a courtyard, the temple itself and additional rooms, mostly as side-rooms, all within an enclosing wall. The Ishtar-Kitītum temple (Wightman 2007: 41, Figure 1.18; Hundley 2013: 55, Figure 3.3) was orientated almost due north–south, and had a near symmetrical design; it had a familiar two-room plan with direct in-line access from the twin-towered gateway of the forecourt. Access to the forecourt was also available from a larger forecourt at right angles to the in-line one. The Ninmakh temple in Babylon (Wightman 2007: 63, Figure 1.27; Hundley 2013: 56, Figure 3.4) was a two-room broadroom temple with direct access to the cult object from a large forecourt.

Several Mesopotamian temples were associated with ziggurats. A ziggurat was a monumental, stepped, pyramidal structure, each successive 'step' of which was a substantial raised platform proportionately slightly smaller in size than the one beneath it. The platforms were normally square or rectangular; their sides sloped gently inwards from the bottom. While ziggurats were sacred structures, they were solid (apart from internal drainage channels) and not in themselves temples.[23] Nevertheless, ziggurats might have temples or shrines physically attached to them. According to a report attributed to Nebuchadnezzar II, recorded on a stele now in the Schøyen Collection,[24] the ziggurat of Etemenanki (also known as the ziggurat of Marduk) in the city of Babylon was rebuilt and enlarged in the seventh to sixth centuries BCE. During that time it acquired seven platforms and a height of approximately 91 m (almost 300 feet), and had a shrine dedicated to the deity Marduk surmounting its highest platform (Bienkowski and Millard 2000: 42, 43; George 2007; Van De Mieroop 2015: 277, 278 Figure 14.2; Schøyen Collection 2017: MS 2063). Little of the ziggurat remains, although there has been some partial restoration of the walls supporting the three lowest platforms. It is believed that several other ziggurats were surmounted by shrines or temples dedicated to their local patronal deities, such as, for example, the ziggurat of Enlil at Nippur and the ziggurat and temple – perhaps of Inanna – in the Eanna district of Uruk.

Some 80 km (50 miles) west of Mosul in Nineveh Province in Iraq lies the archaeological site of ancient Karana (or Qattara), identified with modern Tell

al-Rimah. Among its other features, the site displays the ruins of an enclosed temple complex from *c.*1800 BCE abutting the western wall of a ziggurat at ground level (Dalley 1984/2002: 112–116; 113, Figure 36; 114, Figure 37; Wightman 2007: 31, Figure 1.13; Hundley 2013: 61, Figure 3.8). The ziggurat measures approximately 29×24 m (95×78 feet). The temple complex measures approximately 45×43 m (148×141 feet) and is built round a central courtyard in the manner of some of those discussed above. The design is symmetrical on an east–west axis; it permitted direct access from the gateway midway along the east wall, across the courtyard, through a broadroom sacred room, to a (smaller) broadroom most sacred room (which had two adjoining side-rooms). The presence of stairs in the spaces at the northeast corner suggests that originally there may have been side-rooms on more than one level or that there may have been one or more towers beside the gateway into the central courtyard.

The remains of the mid-second-millennium BCE city of Kar-Tukulti-Ninurta (modern name: Tulul ul Aqar) on the west bank of the Tigris, about 3 km north of the city of Assur, include a ziggurat with an adjoining temple penetrating a short way into it. (Wightman 2007: 45, Figure 1.20; Hundley 2013: 60 with Figure 3.7). The remains were excavated in 2003–2004 as part of the Taane Project of the University of Toronto. The whole structure – temple and ziggurat – is orientated east–northeast to west–southwest. The ziggurat measures approximately 31×30 m (101×98 feet), and the temple approximately 40×44 m (131×144 feet). In the temple, an opening off-centre along the easterly wall led into an anteroom. Thereafter, an opening centred along the eastern wall of the anteroom led into a square courtyard from where there was direct access to the cult object in a niche against or carved into the side of the ziggurat. The niche was approached from the courtyard via a broadroom sacred room from which a short flight of steps led up to a raised floor level. Beyond the cult object was the body of the ziggurat. The layout of the temple is a simplified form of that of the temple at Karana/Qattara.

1.3.2.4 Egypt

The temples of ancient Egypt are well known (Wightman 2007: 66–131; Teeter 2011: xix–xxiii, Pls. IV, V; Hundley 2013: 17–48). The basic architectural style that was normative for temples from the New Kingdom (1550–1069 BCE) onwards is amply illustrated by the great temples of Thebes (Wightman 2007: 113–123; Hundley 2013: 19–29). It is typified by the temple of Khonsu (also Khons), one of several temples in the sacred precinct of Amun-Re at Karnak on the east bank of the Nile (Wightman 2007: 104, Fig 2.1; 116; Hundley 2013: 19–21 with Figs. 2.1, 2.2; see below).

The temple of the moon-god Khonsu was built in the twelfth century BCE on a pre-existent temple site, and underwent minor modifications up to and including the seventh century BCE. Its ground plan is rectangular and symmetrical along its longitudinal axis, and there is a direct approach to the most sacred room at the

opposite end of the structure from the entrance. The overall ground plan measures approximately 70×27 m (230×88 feet).

The temple was entered through a massive pylon gateway which led into a colonnaded open-air courtyard. From there a centrally placed ramp led up to a colonnaded broadroom portico. Beyond that, a centrally placed doorway led into a broadroom hypostyle hall. Up to that point, all the spaces were the same width, namely the width of the structure. However, beyond the hypostyle hall was an almost square broadroom the width of which was reduced in relation to the preceding spaces by the presence of built-in side-rooms. This room, sometimes referred to as the bark chapel, housed the sacred bark (boat) of Khonsu on a centrally placed stone plinth. The next room was a broadroom with four pillars, smaller than the preceding room, which formed a kind of sacred room prior to the final room which was a small most sacred room. Hundley (2013: 21, Figure 2.2, caption) has drawn attention to the gradual reduction in the size of rooms as the most sacred room was approached. It applied not only to length and breadth, but also to height. To approach the most sacred room was to experience a gradual reduction in ambient space, ambient illumination, and acoustic resonance, which was calculated gradually to intensify people's natural tense excitement and sense of awe as they drew close to the sacred presence of the cult object.

A similar architectural plan is evident in the mortuary temple of Ramesses III at Medinet Habu on the west bank of the Nile, built in the period 1186–1069 BCE (Figure 1.2; Wightman 2007: 108, Figure 2.16; 111, Plate 2.7, 2.8; Teeter 2011: xvi, xxiii, Plate IV). It was much larger than the temple of Khonsu, measuring approximately 150×112 m (492×367 feet), and was surrounded by a complex of smaller buildings, including two additional, much smaller temples. The whole was enclosed within an outer wall and a massive inner wall. The complex thus comprised a substantial precinct measuring approximately 300×210 m (1000×690 feet), approximately as long as the Eiffel Tower is high. The balanced in-line plan of the temple shows the same order of types of component spaces as in the Khonsu temple except that here there were two courtyards each with its pylon gateway. There was also a similar rise in the floor level beyond the second courtyard, and a similar gradual reduction in the size of the rooms on the approach to the most sacred room.

The Luxor temple (the main temple in the sacred precinct at Luxor) and the temple of Amun-Re in the sacred precinct of Amun-Re at Karnak were the two largest of the Theban temples. Their only architectural differences from the mortuary temple of Ramesses III at Medinet Habu, and the temple of Khonsu at Karnak, were their size and their multiplication of prominent features (pylons, courtyards, colonnades). The Luxor temple measured approximately 230×50 m (754×164 feet) to which the length of the precinct added another 75 m (246 feet), making the whole precinct approximately 305 m (1000 feet) long, almost identical with the length of the precinct at Medinet Habu (Wightman 2007: 121, Figure 2.22; Teeter 2011: xxii).

Figure 1.2 Medinet Habu. Mortuary temple of Ramesses III. Aerial view of remains. Copyright © Martin Child via Getty Images. Used by permission.

The temple of Amun-Re at Karnak, which gives its name to the precinct, was the largest of all the ancient Egyptian temples, measuring approximately 350×100 m (1148×328 feet). The immediate area of the most holy room is from the period *c.*2055–*c.*1650 BCE (Middle Kingdom); the extant form of the first pylon is probably from the period *c.*380–*c.*362 BCE (just prior to the Greco-Roman period in Egypt). The vast majority of the remainder of the structure is from the period *c.*1550–*c.*1186 BCE (within the New Kingdom). The precinct was trapeziform and covered an enormous area. Its two parallel sides (along the longer one of which the entrance to the temple is centred) were approximately 500 m (1640 feet) apart; the other two sides were approximately 590 m (1936 feet) apart at their wider end, and approximately 500 m (1640 feet) apart at their narrower end (Wightman 2007: 114, Figure 2.18; 115, Figure 2.19; Teeter 2011: xxi; Hundley 2013: 20 with Fig 2.1; 22 with Figure 2.3).

1.3.3 Open-air cultic installations and other sacred structures

1.3.3.1 Introduction

In contrast to temples, open-air cultic installations were not symbols of official power and prestige even though some of them were used as tools in the

promotion of political and religious agendas. They were usually open-air structures for cultic gatherings, popular in character, and in varying degrees independent of local official religious and political policies. They were found in a variety of types of setting, and they exhibited a variety of physical forms. Most of what is known about such installations is concerned with the Levant and comes from biblical sources and the archaeological explorations generated by interest in the biblical world. Nevertheless, there were also such sites elsewhere in the ancient Near East. At present these are not well known and consequently only partially understood. In themselves they have attracted relatively little archaeological and historical interest.

1.3.3.2 Levant

Open-air cultic installations were important as places of cultic worship in the Levant generally in antiquity (Biran 1981; Steiner and Killebrew 2013). Many such locations are mentioned in the HB where they are termed *bamôt* (often translated 'high places'). The Hebrew term and its singular form *bamah* 'high place' connote elevation in importance or status as well as, and often instead of, literal elevation in terms of relative altitude.[25] The NJPST renders the Hebrew terms as 'shrine' or 'cult places' (even when the Hebrew is singular); the NRSV also frequently translates the singular form as 'shrine'.[26]

Biblical narratives may sometimes give the impression high places were located on hilltops in rural settings. This was certainly the case with some of them, but there were also others which were located in valleys and in towns or cities. Biblical and archaeological references to high places in Moab, east of the Dead Sea, mention only urban locations.[27] Many of the biblical references to high places west of the Rift Valley mention or imply urban as well as rural settings.

Several elements were characteristic of Levantine high places: a large altar (*mizbéaḥ*) for sacrifices, standing stones (*matsebôt*, singular *matsebah*), wooden asherah poles (*ʾasherah*/*ʾasheyrah*), altars for burning incense, and perhaps a room, hall or enclosure (*lishkah*) where sacrificial meals were eaten. Not all those elements were present at all high places; at some, only one element was in evidence, at others there were various combinations of two or more. The number and size of attendant architectural structures (for example, small temples and enclosures for storage or for eating sacrificial meals) also varied.

Biblical Gezer is famous for its standing stones (Wightman 2007: 176, Plate 3.4). Standing stones were memorials erected before the deity or deities, by local individuals on behalf of themselves or their communities, to commemorate great achievements they had made or great benefits they had received. They were thus erected in a spirit of piety and gratitude. The standing stones at Gezer probably date from the beginning of the third millennium BCE (Ben-Ami 2008).[28]

At Dan (Tel Dan) there are remains of an extensive, apparently open-air, cultic structure. It includes a large raised flat paved area (which was either itself a sacrificial altar or a platform on which such an altar stood) with a flight of wide steps leading up to it. The site also includes remains of what may be

a later structure (Wightman 2007: 186, Figure 3.17; 187, Plate 3.6). Several sets of standing stones have been found at Dan (Hess 2009: 302). Gezer and Dan were important cities as well as locations of high places.[29]

Bethel may also have been the location of an ancient urban high place. HB 1 Samuel 10.3–5 has been regarded as implying that it was so (NRSV, note to 1 Sam. 10.3), but in fact the biblical text in both the Hebrew of the HB and the Greek of the LXX is inconclusive.[30] However, a measure of certainty is provided by HB Genesis 28.10–22 which functions as an aetiology for the founding of Bethel and as a witness to the early existence of a tradition that regarded Bethel as a place near ancient Luz and the location of an urban sacred site which was dedicated to the worship of El and marked by a standing stone.

At Megiddo there is a large, raised, circular Early Bronze Age open-air altar with a short flight of steps up to it. The altar is located immediately behind the remains of a Middle Bronze Age IIA temple. It is possible that at the time when the altar was built, Megiddo was a high place without any of the trappings of urban life (those would have come later and would have included a temple).

References in the books of Deuteronomy and Joshua to events that took place on Mount Ebal provide details which imply that in the supposed time of Joshua one of the summits of the mountain was a cultic site exhibiting features typical of those of a high place, even though the site is not referred to specifically as a high place in biblical texts. The texts in Deuteronomy and Joshua refer to standing stones and to animal sacrifices on an altar of unhewn stones.[31] Archaeological excavations on Mount Ebal have not discovered standing stones, but they have revealed a considerable structure dating from between *c.*1250 and *c.*1150 BCE, a period the beginning of which could coincide with the latter half of the supposed lifetime of Joshua. The site's foremost archaeologist, Adam Zertal, has claimed to have discovered an altar of unhewn stones, a ramp leading up to it, and evidence of the sacrifice there of animals permitted by Mosaic law.[32] Zertal's claims have been met with scepticism in some quarters. The main issues have been whether Zertal has identified an actual altar (and if so whether it might correspond to the altar Joshua is said in Joshua HB 8.30–34 to have built), and also whether the site was in fact a cultic site. Nevertheless, continuing investigations at the site, and analysis of the finds, are tending increasingly to support Zertal.

The Samaritan tradition enshrined in the Samaritan Pentateuch (SP) names Mount Gerizim, not Mount Ebal, as the place where the Israelites were to erect standing stones, build an altar of unhewn stones, and offer animal sacrifices (SP Deuteronomy 27.2–9). It is possible that those elements belonged to a cultic site (a high place) on Mount Gerizim rather than (or perhaps as well as) Mount Ebal.[33] Remains of a structure thought by some to be an ancient temple have been discovered on Mount Gerizim, but they are no older than the sixth or fifth century BCE (Grabbe 2008: 32, 33).

In HB 1 Samuel 9.11–24, references to a post-sacrificial communal meal at or near a *bamah* include mention of a *lishkah*, a dining room or dining area (9.22; translated 'hall' in the NRSV and NJPST) where the meal was eaten. A *lishkah* may have been a normal concomitant of a high place. The text at 9.14 implies that the *bamah* was outside a town which is vaguely located in or near a region called Zuph (9.5–6) but the town is not identified.[34]

1.3.3.3 Anatolia

In ancient Anatolia, open-air installations with cultic functions were many and of considerable variety (Bittel 1981; Fox 2010; Roller 2012). However, few of them are fully excavated. While not all had elevated settings, it seems that the majority were located on hills or mountains. They consisted typically of a stone altar for sacrifices and a surrounding area where worshippers could assemble. In addition, there might be designated areas or structures for the enclosure of animals and the preparation of sacrifices. Writing and various forms of symbolic decoration might be present, carved on stelae and other stone surfaces.

In southern Anatolia, the mountain Jebel Aqra (also Ṣaphon/Hazzi/Kasios) on the Mediterranean coast on the present-day Turkish–Syrian border, approximately 30 km (19 miles) north of Ras Shamra (ancient Ugarit), was the location of an important cultic site throughout antiquity (Fox 2010: 242–258). So important was the site that the whole mountain was deemed sacred. In addition to an altar, there was a considerable architectural structure which by the time of, or during, the Greco–Roman period acquired architectural features similar in style to those of Greek temples.

In Phrygia in central Anatolia there are several elevated sites where deities including a sky god and a mother goddess were worshipped. In the Phrygian uplands there are remains of open-air cultic places characterised by 'elaborate rock-cut façades imitating Phrygian architectural structures' (Roller 2012). In some of those places the rock carvings include mother images.

In eastern Anatolia there are remains of several sites erected by the Urartian people to their principal deity Haldi (a sky god) and his consort Teshub. In the region of Van, surrounding Lake Van, some of those sites take the form of hollows or short caves cut into the rock of cliff faces, where the deity was thought to manifest himself (Roller 2012).

1.3.3.4 In Mesopotamia and Egypt?

There is no evidence that open-air cultic installations in the Anatolian and Levantine sense existed in either Mesopotamia or Egypt in antiquity. In the case of Mesopotamia, Tammy Schneider has pointed out that the region had an urban culture, and all of the known cultic centres – which are temples – were to be found in cities. Therefore, 'there are no references to cultic activity outside the cities, no sanctuaries or cult objects outside cities, nor sacred trees, rocks, rivers, lakes, or seas with cultic significance' (Schneider 2011: 67–68). Somewhat similarly in Egypt, the temples

were the centres of the religious cult to the extent that even though not all of them were located in cities, their status as the nationally and royally endowed official places of cultic activity rendered other types of location for the celebration of the country's deities, especially its deified pharaohs, inappropriate.

The ziggurats of Mesopotamia, though literally 'high' places insofar as they were artificial, stylised sacred mountains erected in places where there were no natural topographical mountains, nevertheless belonged to the urban religious cult, physically as well as ideologically. They were not unattached places of religious assembly for worship in the manner of the Anatolian and Levantine high places.

The Egyptian pyramids, though also artificial, stylised mountains in places without natural mountains, were, or marked the location of burial places of royalty and other wealthy, high-standing members of society. They were not sacred in themselves, and were not places of ad hoc public religious assembly.

1.3.3.5 An open-air cultic installation in Elam

Egypt and the eastern half of the ancient Near East seem to have been devoid of high places as generally understood. However, excavations conducted in

Figure 1.3 Susa. The *sit shamshi*, a bronze model of an open-air cultic place, *c.*1150 BCE. Photo © RMN-Grand Palais (musée du Louvre) / Hervé Lewandowski. Used by permission.

1904–1905 at the site of Susa, the ancient sometime capital of Elam in the extreme southeast of the Near East, unearthed an artefact which could give an idea of what high places in that region were like (Potts 2013, 2016).

The artefact is a twelfth-century BCE bronze model of an Elamite open-air cultic place (Figure 1.3; Potts 2016: 231–232 with Plate 7.21). The model is known as the *sit shamshi*.[35] It shows a structure of some complexity, comprising leafy trees, standing stones, what appear to be several altars, a large, floor-standing jar (perhaps for wine for libations, or for water for purificatory rites) and two naked male figures facing each other in a half kneeling position, performing what is reckoned to be a rite celebrating the rising sun. The urban location of the find has suggested that the model might illustrate a structure on the acropolis of ancient Susa. On the other hand, it is possible that the model is a stylised, and perhaps somewhat idealised, assembly of elements that were typical at Elamite open-air cultic places.

Finds of shrine models from antiquity are by no means unusual, especially in Cyprus and the Levant, where many were made of clay.[36] However, the *sit shamshi* is exceptional for its state of preservation, its detail, its workmanship in metal (especially the use of rivets to fasten some of the objects to the base) and its size (its base measures 60×40 cm; 23.62×15.75 inches). It is engraved with a dedicatory inscription purporting to be by Shilhak-Inshushinak I, King of Anshan and Susa *c.*1150 BCE.

Notes

1 Two major comprehensive general surveys, each from a different perspective, are valuable: Johnston et al. 2004 and Insoll 2011. Reference work: Orlin et al. 2016 (focuses mainly on ancient Greek, Egyptian and Levantine culture).

2 The pharaoh Amenhotep IV, later renamed Akhenaten, who reigned from 1352 to 1336 BCE, introduced a religious reform in Egypt in which the centuries-long custom of worshipping several deities, with the god Amun as the chief of them, was replaced by worship of the god Aten, the sun disc, alone. See van Dijk 2003: 265–281; Wilkinson 2010: 257–278; Teeter 2011: 182–184. Specifically on Amun and the Aten, see Pinch 2004: 100–101, 109–110, respectively. For a sociological and theological analysis of Akhenaten's religious reform, see Teeter 2011: 184–196.

3 The relationship between Israelite monarchs and deity, the extent to which monarchs were regarded as bearing attributes – and therefore in some cases names – associated with deity (theophoric kingship), and the extent to which the Israelite deity's pre-eminence among a pantheon of deities was viewed in terms of royal pre-eminence, are complicated issues in the theology of royalty. They are recurrent themes in discussions about ancient Israelite and Judahite religion. Detailed overview and discussion in Smith 2003: 151–166.

4 The Ugarit/Ras Shamra tablets are unlikely to be later than *c.*1200 BCE since the results of recent radiocarbon measurements point to a destruction of the northwestern Levant between 1192 and 1190 BCE: see Kaniewski et al. 2011.

5 In the HB, there are over seven times more occurrences of the word *ʾelohiym* than the word *YHWH*.

6 'Milcom/Molech': These are believed to be variant spellings of the name of one and the same deity most usually known as Molech. The LXX has Moloch. Molech was originally an Ammonite god. In some texts in the HB, he seems also to be referred

to by the names Malcam and Malcan, which may result from errors of transmission. See the entries 'Molech' and 'Milcom' in standard reference works.

7 For biblical references and variant translations of the names, see the larger concordances and other standard reference works.

8 'Calves' as objects of worship: Hebrew *ʿegel* (*ʿeglah* in HB Hos. 14.2) 'calf, heifer, steer, young bullock'. Miller (2000: 93–94, 256–257, n. 259) associates the term also with the 'bull'. Although bull imagery was generally associated with Baal and with El as warrior, there may have been some crossover in the application of bovine epithets to male deities in the ancient Near East. See also the entries 'Bull' and 'Calf' in the standard reference works. Estimates of the dates of Jeroboam I's reign vary.

9 On the Amarna correspondence/letters/tablets, see Hess 2009: 92–95 (the shaded box on Hess's p. 95 contains his translation of the letter referred to here); Hawkins 2013: 67–68 and notes; Van De Mieroop 2015, 2016: Section 7.2, Box 7.1, Document 7.1. Critical edition: (Rainey 2015). On ancestor worship in ancient Egypt, from Middle Bronze Age II onwards, see Bryan 2003: 226, 243; Shaw 2003a: 7–8.

10 See 'List of Egyptian deities', at: https://en.wikipedia.org/wiki/List_of_Egyptian_deities. Sources are cited for all the deities listed, except the goddesses Anput/Input (for whom see www.ancientegyptonline.co.uk/anput.html [2010]) and Tenenet/Tjenenet (for whom see www.ancientegyptonline.co.uk/tjenenet.html [2016; with bibliography]).

11 e.g. HB Leviticus 18.21; Deuteronomy 12.29–31; 18.9–10; 32.17–18; 2 Kings. 3.26–27; Ezekiel 16.20–21; Psalm 106.37–38.

12 The dating is disputed. For this, descriptions of the sites, and controversies about the nomenclature of the structures, see Theocaris et al. 1997; Lefkowitz 2006; Liritzis 2011.

13 'Room' in this context means a walled and roofed enclosure. Terminology for sacred space in temples is not yet standardised (compare Wightman 2007: 929–952 and Hundley 2013: 15–16). Here, simple descriptive terms are used for the sake of clarity.

14 On the Gudea Cylinders, see Black et al. 2004: 44–52 (includes an English translation of an extract from the text). Full text (transliteration and English translation) in ETCSL 2.1.7. The Gudea Cylinders are currently housed in the Musée du Louvre, Paris, France, Département des Antiquités Orientales, Richelieu, rez-de-chaussée, salle 2, numéro d'accès MNB 1511 et MNB 1512.

15 HB 2 Chronicles 3.1–7.11 provides parallel expanded and elaborated descriptions of the building, decorating, furnishing and dedication of the pre-exilic Jerusalem Temple. The books of Chronicles are post-exilic; their descriptions are therefore likely to have been coloured by the appearance of the temple in the Chronicler's own day. It is nevertheless possible that those descriptions include elements belonging to ancient traditions. See within the discussions (concerned primarily with musical matters) in Smith 2011: 16, 39.

16 'probably internal measurements': compare the account of the measurements of the Jerusalem Temple of the prophet Ezekiel's vision, in Ezek. 40.48–41.4; on the temple of Ezekiel's vision, see Busink 1970: 58–61, 1980: 701–775. On the biblical book Ezekiel, see Joyce 2009. The cubit (Hebrew: *ʾamah*, singular but also functioning as plural; *ʾammatayim*, dual; *ʾamôt*, plural) was notionally the distance from the elbow to the tip of the middle finger of the outstretched hand, approximately 46 cm (18 inches). In Israelite and Egyptian antiquity the length of the cubit varied with time, place and purpose: see Powell 1992: 899–900; Hoffmeier 2007: 219–220.

17 Conjectural plans and elevations, but without discussion, are more conveniently available in Soggin 1993: 377 (Plate 10), and the notes to 1 Kings 7 in HCSB.

18 The term 'longroom' is used here and subsequently to mean a regularly rectangular room which is longer than it is broad. The term 'broadroom' as used below and later, means a room which is broader than it is long. The orientation of the room depends on the perception of whether the front and back of the room are represented

by the two opposite shorter walls or the two opposite longer ones. The former representation would give a longroom (length is greater than breadth), the latter would give a broadroom (breadth is greater than length). This terminology is not standardised (compare n. 13).

19 The deity's 'name': HB 2 Samuel 7.4–13; 1 Kings 5.17–19; 8.12–21, 27–48; 9.3a; the deity's 'eyes and … heart': HB 1 Kings 9.3b.

20 The theology of the presence of the Israelites' deity in the temple is complicated; for a summary, see Stacey 1990: 47–48 and the literature cited in n. 47 and n. 48 there.

21 On or prior to 22 January 2018, approximately half of the excavated remains of the Ain Dara temple, as described here and illustrated in Figure 1.1, were severely damaged by an explosion believed to have been the result of an airborne attack (it is not known whether the temple might have been deliberately targeted). For a detailed report on the present state of the Ain Dara temple, see Danti et al. 2018.

22 Compare the two Upper City temples, designated T3 and T6, respectively, in Wightman 2007: 225, Figure 4.10.

23 Generally on ziggurats, see: Black and Green 2000: 327–328; Wightman 2007: 25–34; Schneider 2011: 68, 69, 70, 71; Hundley 2013: 70–71; standard reference works.

24 This stele (Schøyen Collection MS 2063) is the so-called 'Tower of Babel Stele'. Since its excavation in 1917, the information it contains has been the source of fanciful associations of the Etemenanki ziggurat with the biblical tower of Babel (HB Genesis 11.1–9).

25 The Hebrew word *bamah* is also often used to mean a raised area or platform (e.g. supporting an altar or a cult object) in a temple.

26 The traditional English rendering of the Hebrew *bamah/bamôt* as 'high place, high places' reflects the Latin of the Vulgate, which translates the Hebrew with one or another form of the word *excelsus*, meaning 'high, lofty, elevated, exalted', literally and figuratively. The LXX typically translates the Hebrew terms with a form of the word *stēlē* 'upright stone, pillar', except in 1 Reigns [= HB 1 Samuel] 9.12–14, 19, 25; 10.5, where the Hebrew word *bamah* is treated as if it were a place name and rendered transliterated as *Bama*.

27 Hess 2009: 305 and n. 28–n. 34. The archaeological referents include the Moabite Stele, also known as the Mesha Stele or the Moabite Stone (ninth century BCE), on which see Rollston 2010: 53–54.

28 On the ancient practice of erecting standing stones as memorials of significant events, compare the narrative at Joshua 4.1–9 which relates that the Israelites set up 12 stones taken from the River Jordan as a memorial of their safe crossing into Canaan.

29 For Gezer, see the official website ('Can You Dig It?') of the ongoing archaeological project conducted by the New Orleans Baptist Theological Seminary, with reports up to 2013, online at http://nobtsarchaeology.blogspot.no/2011/07/gezer-dig-2011-report-part-two.html; and (Shapira 2013). For Dan, see 'Tel Dan' at the official website of the Nelson Glueck School of Biblical Archaeology in the Hebrew Union College, Jewish Institute of Religion, online at http://ngsba.org/en/excavations/tel-dan.

30 To interpret the text of HB 1 Samuel 10.3–5 as showing that Bethel was a high place, it is necessary to be able to identify the location of the *bamah* 'high place' (NRSV 'shrine'), mentioned towards the end of 10.5, with *beyt-ʾel* (Bethel), named in 10.3. But the biblical text does not support that identification.

31 HB Deuteronomy 11.29; 27.2–9, 13–26; Joshua 8.30–34.

32 Adam Zertal, 'The Cult Site on Mount Ebal', online at: http://ebal.haifa.ac.il/ebal01.html; Hess 2009: 216–221; Hawkins 2012: 226–227.

33 The apparent recent discovery of what has been claimed to be a fragment of a Dead Sea Scroll, purportedly from Cave 4 at Qumran, containing a version of the text of HB

Deuteronomy 27.4–6 which in verse 4 names 'Mount Garizim' (Gerizim) as the place of the Israelites' assembly (in contradistinction to 'Mount Ebal' in the same verse in the HB), has been hailed as supporting the SP reading to the extent that 'Mount Garizim' in the SP is the correct reading, and 'Mount Ebal' in the HB is an alteration. However, the fragment is in all likelihood a forgery, and the history of its provenance and discovery a fabrication. See the detailed examination in (Justnes 2017) (in the light of which it should be noted that James H. Charlesworth's essay 'What is the Samaritan Pentateuch?' in the prefatory material to Benyamim Tsedaka's English translation of the SP [Tsedaka 2013: xv–xx], incorporates the assumption that the fragment is genuine [see especially Tsedaka 2013: xviii–xix]). In a very similarly worded text in an extension to verse 14 of HB Exodus 20, the SP refers to 'Mount Garizim', thereby reinforcing the traditional Samaritan preference for Garizim/Gerizim, against the HB's 'Ebal' (SP Exod. 20.14c). However, the extension to Exod. 20.14 in the SP is not present in the HB, nor in the LXX, nor in the Vulgate (in the latter two translations, HB verse 14 = verse 17, as in many modern translations).

34 The town may have been Ramah of the Zuphites in the hill country of Ephraim, the home town of Samuel (see notes to HB 1 Samuel 1.1 and 9.5–6 in e.g. NJPST, JSB, NIV Study Bible, and NRSV).

35 The *sit shamshi* is currently housed in the Musée du Louvre, Département des Antiquités Orientales, Paris, France, numéro d'accès Sb 2743.

36 For Cyprus, see e.g. Webb 2013: 363 and Figure 24.5 (Marki region, Early Bronze Age). For the Levant, see e.g. Bourke 2013: 474–475 and Figure 31.5/17 (Wadi al-Ajib, Site 42, Middle Bronze Age); Herr 2013: 656 and Figure 42.5 (Tall al-ʿUmayri, Iron Age I); Killebrew 2013: 735 (Israel, Iron Age II); (Katz 2016).

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2 Types of cultic activity and the music associated with them, 1

2.1 Introduction

Ancient sources show that music was associated with five main types of cultic activity in the Near East, both during the period under review and later. The five types are:

- liturgies and rituals;
- processions;
- cultic dance;
- mantic traditions; and
- warfare.

The present chapter discusses the first three types of cultic activity listed above, and their associated music. The remaining two types are discussed in Chapter 3. The second and third items in the above list could justifiably be classified as subtypes of the first. However, they have particular characteristics of their own and are therefore treated individually here.

2.2 Music at liturgies and rituals

2.2.1 Israel, Judah and the Levant

Several passages in the Hebrew Bible (HB) witness to the use of music in ancient Israelite and Judahite liturgies and rituals. They refer variously to song and to musical instruments as well as to singing, playing instruments and making music. The last two items, often expressed in biblical Hebrew by words built on the root letters *ZMR*, are considered likely to have implied a combination of vocal and instrumental sound, as probably also did the generic term for song in liturgical and ritual contexts, *ShYR* (Smith 2011: 40–43).

Translations of the Bible are seldom consistent in rendering musical terminology – both externally from one translation to another and internally within any one translation. Lamentation and wailing, for example, are distinguished from each other in biblical Hebrew (*qiynah* and *nehiy*, respectively), but are often

confused in translations or subsumed under 'mourning' (Smith 2011: 30, 135–136). For the sake of clarity in the biblical passages quoted below, salient Hebrew terms are supplied transliterated in bracketed annotations (with explanatory translations where necessary) inserted into the running text. The musical instruments mentioned in pre-exilic biblical texts are discussed in greater detail in Chapters 4 and 5.

Early biblical evidence for music at liturgies and rituals appears in the divine commands related in HB Numbers 10.1–10, which operate aetiologically as authority for the use of metal trumpets both for signalling and, in 10.10, as instruments intrinsic to sacrifices of burnt offering and well-being, regularly throughout the year. The trumpets are to be played by Aaronite priests (10.8). No sacred location is specified in 10.1–10. The immediate narrative context is the Israelites' time in the wilderness. However, the formality of 10.1–10, together with the reference in 10.10 to an established and ordered sacrificial system, suggests the Jerusalem Temple or some other substantial contemporaneous cultic centre where a developed system of worship might have been employed. It is possible that such a system of worship was in use at a number of cultic centres during the First Temple period.

In HB Amos 5.21–24, the prophet Amos associates song and the music of lyres with offerings and sacrifices in the course of an oracle of the deity's judgment on faithless Israel; and First Isaiah says of the faithful, to whom the deity is compassionate: 'You shall have a song [*hashiyr*] as in the night when a holy festival is kept' (HB Isaiah 30.29a). A location is not specified in either of those two passages. But since Amos's oracles emanate from the deity in Zion/Jerusalem, and Isaiah's oracle in Isaiah 30 is addressed to the people who live in Zion/Jerusalem, readers are probably intended to understand the ritual of the Jerusalem Temple as the context of the music referred to.[1]

The ritual of the Jerusalem Temple is probably the context of the music referred to in HB Isaiah 38.20. The verse occurs in one of three Bible narratives of an illness and miraculous recovery therefrom experienced by Hezekiah, King of Judah (HB 2 Kings 20.1–11; HB Isaiah 38.1–22;[2] HB 2 Chronicles 32.24–26). The narratives differ widely in content and scope. The narrative in HB Isaiah 38 is unique in that it contains the text of a poetic thanksgiving for recovery from illness, said to have been written by Hezekiah (38.9). The poem itself (38.10–20) has the form and language typical of a personal votive offering of thanksgiving for deliverance, such as would have been presented at a cultic place.[3] It has no material connection with Hezekiah, and may originally have been an independent item. Nevertheless, its association with Hezekiah in Isaiah 38 suggests that a setting in Jerusalem is envisaged, and the reference to making music 'at the house of the LORD' in the last verse of the poem (38.20) suggests the temple. In this respect, the last verse is especially pertinent. The NRSV translates that verse: 'The LORD will save me, and we will sing to ⌊stringed instruments⌋ [Hebrew: "my stringed instruments"] all the days of our lives, at the house of the LORD.' Despite the invocation of song in the second clause in the NRSV translation, the Hebrew makes no mention of it. However, the Hebrew text of those two clauses

is notoriously problematic; no two translations seem to agree about what it says. The following plain translation, which attempts to reproduce both the sense and the word order of the Hebrew, is suggested as a reasonable (though necessarily somewhat inelegant) rendering:

> The LORD (is) for my deliverance
> and my stringed instruments we will play
> all the days of our life
> at (the) house (of) the LORD
> (Isaiah 38.20, my translation)

Deliverance at the hand of the deity, the playing of stringed instruments, and the temple location ('at the house of the LORD') are basic elements in the verse and are present in all authoritative translations. The 'stringed instruments' referred to in the second clause would probably have been lyres.[4]

The book of Psalms is rich in references to music in connection with ancient Israelite religion. Some 37 psalms are reckoned to have originated during the pre-exilic period, and some 30 during the exile.[5] However, by no means all of them contain musical information. Of those that do, relatively few indicate the context of the music in worship, or the location or type of location envisaged by the psalmist.

Of the psalms in the HB which are reckoned to be pre-exilic, Psalms 66 and 68 provide clear evidence of music at liturgies in the Jerusalem Temple. Psalm 66.1(b)-4, 13–15 provides a sacrificial and general liturgical context; Psalm 68.4a(5a) implies a general liturgical context.[6]

In HB Psalms 95 and 144 the Jerusalem Temple is probably to be envisaged as the location of the singing and playing ('let us come into his [*YHWH*'s, the LORD's] presence' in Psalm 95.2a; the Davidic association in Psalm 144.9–10). A ritual context is implied by the cultic shout referred to in Psalm 95.1a ('O come, ⌞let us sing⌟ [*nerannenah* "let us shout"] to the LORD; let us ⌞make a joyful noise⌟ [*neriyʿah* "shout out"] to the rock of our salvation!') and by the references to singing and playing *to* the deity in both psalms. The first person plurals in Psalm 95 imply communal worship.

It is possible that the paying of vows (the presentation of votive offerings) referred to in the second half of verse 8(9) of HB Psalm 61 should be taken to imply a temple setting for the music referred to in the first half of that verse (compare HB Psalm 66.13). Be this as it may, the paying of vows in itself implies a cultic place as the location and a cultic ritual as the religious context.

Psalm 18 in the HB is a poetic expression of gratitude to *YHWH* by a ruler (purportedly David or a ruler of Davidic lineage – verses 49(50)–50[51]) for victories over enemies. No location is specified or implied. Nevertheless, verse 33(34) refers to 'high places' (*bamotay*, a poetic form of *bamôt*)[7] where the psalmist says the deity has made him stand, which could be taken to imply the type of cultic place envisaged as the setting for the music. The psalm provides no clue as to the religious context of the music.

In HB Psalm 81.1(2)-3(4) a cultic festival is envisaged as the context of the music (implied song and specified instruments: hand drum; lyre and 'harp'; natural horn). A cultic place is the obvious setting but whether high place or temple is not known.

In the remaining six pertinent pre-exilic psalms in the HB (Psalms 7; 21; 30; 40; 75; 89) it is difficult to identify locations, types of location and religious contexts. In Psalms 7.17a(18a), 30.4b(5b) and 75.1(2) the giving of thanks to the deity may possibly imply a sacrifice of thanksgiving and thus a cultic place as the setting.[8] In Psalm 21.13(14), verbs in the first person plural imply communal worship. An allusion to the cultic shout in verse 15a(16a) of Psalm 89 may imply a ritual context for the singing referred to in verse 1(2). In Psalm 40.1[2]–3[4], the third clause of verse 2[3] of the psalm speaks of the deity's setting the psalmist's feet 'upon a rock'. This could be read as a metaphor for the deity's establishing the psalmist in Zion, thereby implying that Zion is the setting for the music referred to in verse 3[4]. However, the clause could also be read as a simple metaphor for restitution without reference to a particular place:

> I waited patiently for the LORD …
> He drew me up from the desolate pit …
> and set my feet upon a rock,
> making my steps secure.
> He put a new song [*shiyr*] in my mouth,
> a ⌞song of praise⌟ [*tehillah* '(a) praise'] to our God.
> (HB Psalm 40.1[2]–3[4])

Two of the 30 or so psalms in the HB which are reckoned to be exilic provide information about music as it may have been at the Jerusalem Temple prior to the deportation of Judaeans to Babylonia. In one of them, HB Psalm 43, the psalmist prays to God to deliver him from an 'ungodly people' (verse 1) and from the 'oppression of the enemy' (verse 2) and to lead him back to the temple in Jerusalem. He pleads: 'O send out your light and your truth; let them lead me; let them bring me to your holy hill and to your dwelling' (verse 3) and continues: 'Then I will go [*or* "that I may come" (NJPST)] to the altar of God, to God my exceeding joy; and I will praise you ⌞with the harp⌟ [*bekinnôr* "with the lyre"], O God, my God' (HB Psalm 43.4). In other words, if the deity heeds and acts on the psalmist's plea, the psalmist will be able to perform his musical service for the deity at the temple, as he had done in a time prior to that of the uncongenial circumstances in which he wrote.

The other of those two psalms, HB Psalm 137, is the exilic psalm that provides the most comprehensive information about music at the pre-exilic Jerusalem Temple. It is written from the standpoint of a Temple musician recalling his and his fellow musicians' unhappy exile in Babylonia.[9] It shows that the temple music was intrinsic to the worship of *YHWH*, and that the players of lyres in the temple were also the temple singers.

Six further exilic items from Psalms contain musical information (HB Psalms 13; 47; 96; 98; 104; 105). In two of them (Psalms 96 and 98) the information is ostensibly relevant to the Jerusalem Temple. However, none of the six contains evidence that the information represents recollections from before the exile. In addition, the musical information itself provides no clue as to the time or place to which it refers since it is expressed in stock phrases which belong generally to psalmodic language.

Of all the psalms discussed above, 15 would seem to provide reasonably reliable information about music in relation to ancient Israelite liturgies and rituals (HB Psalms 7; 18; 21; 30; 40; 43; 61; 66; 68; 75; 81; 89; 95; 137; 144).

The presence of liturgical and ritual musical information in a psalm does not automatically imply that the psalm itself was employed in a liturgical or ritual context. It may nevertheless be taken as suggestive of the style of the textual material that was sung in formal worship. This point is especially relevant to HB Psalms 21, 68, 95 and 144 (4 of the 15 psalms listed above) since they may be classified as hymns to the deity. The texts of those four psalms may give some idea of what such hymns were like.

As a consequence of the standing of Israel and Judah's kings in relation to the deity, there are no hymns to kings as deities in the HB (§1.2.2.1 with n. 3). There is, however, a hymn of praise to a mortal king, namely HB Psalm 45, a pre-exilic psalm which extols an unnamed king on the occasion of his wedding. The text at Psalm 45.6b[7b]–7[8] makes it clear that the king in question is a mortal who is dependent on the deity for his royal status:

> ⌞Your [the king's] throne is a throne of God, it⌟ [NRSV margin] endures for ever and ever.
> Your [the king's] royal sceptre is a sceptre of equity;
> [7[8]] you love righteousness and hate wickedness.
> Therefore God, your God, has anointed you
> ⌞with the oil of gladness beyond your companions⌟ [*or* 'from among your companions with festive oil' (LEB)][10]
>
> (HB Psalm 45.6b[7b]–7[8])

Verses 8[9]–15[16] of HB Psalm 45, which follow on from the above inset quotation, suggest that the royal palace is envisaged as the setting for the wedding.

Given the occasion for which HB Psalm 45 was written, and the envisaged setting of the occasion, the psalm could have been intended for performance in the palace during the wedding ceremony. This is speculation, but it may be significant that there is no indication that the psalmist envisaged a setting or a context that had to do with worship. The single reference to music (the music of *minniy* 'stringed instruments', verse 8[9]) is placed in the context of 'ivory palaces' and serves to enhance the picture of the king in his residence.

From the wider Levantine sphere there is evidence of the use of many types of instrument, although they are typically mentioned in a general way and

without clear indications as to whether they were cultic instruments. Sources from Ugarit and its environs, in particular, witness to a rich variety of instruments. These have been conveniently assembled for discussion by Caubet (2014) and include the *kinnaru* (lyre), *rimt* (perhaps a type of lyre), *niblu* (harp?), *thulbu* (pipe – probably a generic term), *tuppu* (membranophone – probably a generic term), *masiltama* (cymbals), *marqadima* (clappers) and possibly the natural horn or trumpet. Braun (2002: 180–183) provides evidence for the use of a particular type of natural horn – the conch horn or conch trumpet – in cultic ritual contexts. Conch shells (triton shells) seem to have been in use primarily in seaboard areas. Their natural shape had to be slightly modified in order to produce notes. One extant example, from tenth- to ninth-century Hazor, has a finger hole near the blowing end, which changed the overall pitch of the instrument (Braun 2002: 181).

2.2.2 Anatolia

For Anatolia, music during liturgies and rituals, including funerary rites, is attested in several texts and visual images (Schuol 2004: 9–14; Taracha 2009: 130–131; Brison 2014). One of the texts is concerned with the ritual of the Hittite 'Festival of the Warrior-God' (ANET, 358–361). Four short passages are quoted here. The importance of the ritual may be gauged from the fact that both king and queen are present and take part, perhaps because the Hittites saw the monarchy as the human embodiment of the divine warrior:[11]

> The worshipers of statues play the *arkammi*, the *ḫuḫupal* (and) the *galgalturi* [three musical instruments] before (and) behind the king.
>
> (ANET, 358)

> The worshiper of statues recites hymns.
>
> (ANET, 359)

> The king prostrates himself; the worshiper of statues recites hymns, the *kitash* calls. … Then they drive out the worshiper of statues, the liturgists, the psalmodists and the *kitash*.
>
> (ANET, 359)

> The king (and) the queen drink in standing position …. The liturgists sing. They play the *arkammi*, the *galgalturi* and the *ḫuḫupal* and sing psalmodies.
>
> (ANET, 361)

In the quotations above, two types of liturgical song and three types of instrument are named. There was clearly order and system in the deployment of liturgical musicians.[12]

During the 1950s, some 30 clay tablets inscribed in the Hurrian language in cuneiform were excavated in the ruins of the royal palace at Ugarit, the ancient

city now known as Ras Shamra, on the Mediterranean coast of present-day Syria. The tablets, which date from *c.*1400 BCE, contain variously hymn or song texts (generally referred to as the Hurrian hymns or Hurrian songs), instructions to musicians and what is reckoned to be musical notation; some of the tablets contain all three elements.[13] 'Songs' is the term by which the Hittites referred to Hurrian myths, of which there were several cycles (Taracha 2009: 156–157). Making sense of the texts is sometimes difficult on account of the language and the damaged state of some of the tablets. It is nevertheless clear that several of the more substantial texts are hymns to deities, some strongly suggesting temple usage.[14] The musical information presupposes that the hymns were accompanied by the lyre.

The harp is attested in connection with cultic ritual in Anatolia by a scene carved on a cylinder seal from Konya-Karahöyük, which shows the goddess Ishtar playing a harp before the god Ea (Brison 2014: 187, citing Alp 2000: 4).

2.2.3 Mesopotamia

Music at liturgies and rituals in Mesopotamia is widely attested in ancient sources. One of them is a Sumerian myth from *c.*2600 BCE, preserved on clay tablets and known as the 'Kesh Temple Hymn'. It has the following in a section concerned with sacrificial ritual:

> The **pashesh** priests beat the drum skins; they recite powerfully, powerfully. The bull's horn is made to growl; the drumsticks (?) are made to thud. The singer ⌞cries out⌟ [one manuscript has instead: 'declaims'] to the **ala** drum; ⌞the grand sweet **tigi** is played for him⌟ [some manuscripts. have instead: 'the sweet **tigi** is well tuned'].
>
> ('Kesh Temple Hymn', lines 114–119, ETCSL 4.80.2)[15]

Another relevant source is the Sumerian myth 'The Building of Ningirsu's Temple', written in cuneiform on the Gudea Cylinders (§1.3.2 with n. 14). The text mentions several types of drum used in liturgies and rituals surrounding the establishment of the temple and its furnishings. Two are the **ala** (e.g. ETCSL 2.1.7, line 774) and the **tigi** (e.g. ETCSL 2.1.7, lines 1041, 1044), as in the quotation above from the Kesh Temple Hymn; two further types of drum are the **sim** (e.g. ETCSL 2.1.7, line 774) and the **balang** (e.g. ETCSL 2.1.7, line 1056; **balang** may also be transcribed **balaĝ**). According to the text, that particular **balang** belonged to Gudea and had the name Lugal-igi-ḫuš ('Red-Eyed Lord').[16]

Several ancient Mesopotamian mythological and poetic writings mention **ub** and **lilis** drums in the context of cultic ritual. Two quotations from such writings give some idea of how those drums might have been deployed. The first is a brief statement from which ritual use may be inferred:

> I [Inana] have given the **gala** cult performers **ub** and **lilis** drums.
>
> ('Inana and Ebiḫ', ETCSL 1.3.2, line 174)

The second is a stylised poetic description of ritual action. Here, the parallelism of the text draws attention to the use of the drums in the worship of Inana:

> Making holy **ub** and holy **lilis** drums sound for her [Inana],
> they[17] parade before her, holy Inana.
> [one line not quoted]
> Beating (?) holy **balaĝ** and holy **lilis** drums for her [Inana],
> they parade before her, holy Inana.
> ('A **šir-namursaĝa** to Ninsiana for Iddin-Dagan' [Iddin-Dagan A], ETCSL 2.5.3.1, lines 38–39, 41–42)

It is thought that the **ub** was a large, single-membrane drum similar to the **lilis**, which is known to have been a kettledrum (Shehata 2014: 115 with n. 69; Gabbay 2014: 134). The introduction of the **balaĝ** as a parallelistic element in the extract quoted above suggests that this drum was of a similar type, perhaps also a kettledrum (on this point and related issues, see §5.1.4, paragraph containing n. 4; §5.1.4.1).

Mythological stories were susceptible of ritual re-enactment. In that context, it is not beyond the bounds of possibility that flutes and pipes, which feature in at least two Sumerian mythological narratives, 'Inana's descent to the nether world' (ETCSL 1.4.1) and 'Ninurta's exploits: a **šir-sud** (?) to Ninurta' (ETCSL 1.6.2), were employed in ritual re-enactments of those stories.

An order of proceedings for the celebration of the New Year in Babylon twice states that 'All the *ēribbīti*-priests shall enter and perform their rites in the traditional manner. The *kalū*-priests and the singers (shall do) likewise' (ANET: 331, 333). It goes on to say that a *mashmashu*-priest 'shall beat the kettle-drum inside the temple' (ANET: 333). The kettledrum (which was made of bronze) was evidently an important temple instrument since no fewer than four texts of a ritual which had to be followed by a *kalū*-priest when he covered it (after playing it) are extant (ANET: 334–338).

Prescriptions for a ritual at Uruk attest to the use of liturgical song in the context of animal sacrifice: 'The singers shall [sing] (the hymn entitled) *Elum gud sunna*. (The priest) shall then fill the censers and shall sacrifice a bull and a ram' (ANET: 339).

In Mari during the Old Babylonian period (*c.*2000–*c.*1600 BCE), and in other Babylonian cities, both then and later, there was an office of male singers called 'lamenters' (*kalûm*) who worked under 'lamenters in chief' (**gala māhum**) (Ziegler 2007; Shehata 2009: 119–121). Some scholars have proposed that the lamenters of the third and early second millennium BCE were male eunuchs who, naturally enough, sang in what today would be called the male alto register (Ziegler 2007: 9–10; compare Ziegler 2011: 298). In the temple cult the lamenters sang and played sacred percussion and stringed instruments. At a festival in Mari in honour of a goddess of Eshtar, lamenters performed in cultic liturgies in conjunction with male and female instrumentalists. As their title might suggest, lamenters also sang at funerary rites.

However, it seems that the main purpose of the lamenters was to placate, reassure and delight the deities, especially at times when the deities' peace inside the temple might be disturbed by human activity. In this connection it is interesting to note the following passages from the text of a Mesopotamian rite for the repair of a temple. The text is extant in three versions designated Text A, B and C, respectively (ANET: 339–342):

> [Text A:] You shall sing the lamentation (entitled) *Utudim eta* and the lamentation (entitled) *U'uaba muḫul*. … Facing the temple, you shall sing (the compositions entitled) *Ezi gulgullude*, *Nibishu*, and *Er imsheshe*. After this, accompanied on the *ḫalḫallatu*-instrument, you shall sing for the gods Ea, Shamash and Marduk (the compositions entitled) [three compositions are named]. He(!) shall then stop (singing); you shall take up some water and shall open the curtains.
>
> (ANET: 339. Text B is substantially the same as Text A)

> [Text C:] The *kalū*-priest shall make a lamentation, and the singer shall make groaning noises.
>
> (ANET: 341)

It was presumably lamenters who delivered laments for cities. Of the several extant texts of such laments, that of the lament for Urim (Ur), dating from the first half of the second millennium BCE, is probably the best known.[18]

There are many surviving examples of Mesopotamian hymns to deities.[19] It is possible that such hymns were sung not only in liturgies but also by the general populace, as is perhaps implied in the following quotation from the end of a hymn purportedly by King Ishme-Dagan of Isin (reigned *c.*1889–*c.*1871 BCE) to the goddess Inana, written at some time during the Old Babylonian period (*c.*2000–*c.*1600 BCE): 'I, Ishme-Dagan, have put this [composition] in everyone's mouth for all time.'[20]

Rulers were concerned that they and their great deeds should not be forgotten after their death (Ziegler 2011: 303–304). Their memory was kept alive for succeeding generations not only by their effigies in monumental stone statues and by written and pictorial records of their lives and achievements carved and otherwise represented on stelae and the walls of large buildings, but also by the performance of hymns extolling their greatness. Such hymns were performed publicly as well as in the temples. It was expected that succeeding generations of rulers would ensure performance of the hymns in order to preserve their predecessors' memory. This was a very ancient tradition, as is shown by the following passage about and purportedly by Shulgi, king of Ur from *c.*2094 BCE to *c.*2047 BCE, which dates from no later than the Third Dynasty of Ur (*c.*2112–*c.*2004 BCE):

> May my hymns be in everyone's mouth; let the songs about me not pass from memory. So that the fame of my praise, the words which [the god]

> Enki composed about me, and which [the goddess] Ngeshtin-ana joyously speaks from the heart and broadcasts far and wide, shall never be forgotten, I have had them written down line by line in the House of the Wisdom of Nisaba [goddess of writing, learning, harvest; also known as Nanibgal, Nidaba] in holy heavenly writing, as great works of scholarship. No one shall ever let any of it pass from memory [*small lacuna*] It shall not be forgotten, since indestructible heavenly writing has a lasting renown. The scribe should bring it to the singer, and can let him look at it, and with the wisdom and intelligence of Nisaba, let him read it to him as if from a lapis-lazuli tablet. Let my songs sparkle like silver in the lode! Let them be performed in all the cult-places, and let no one neglect them in the Shrine of the New Moon. In the music-rooms of [the god] Enlil and Ninlil [his consort] and at the morning and evening meals of [the god] Nanna, let the sweet praise of me, Shulgi, be never-ending.
>
> ('A Praise Poem of Shulgi' (Shulgi E), ETCSL 2.4.2.05, lines 240–257)[21]

2.2.4 Egypt

Evidence about music associated with liturgies and rituals in ancient Egypt comes exclusively from sources concerned with major temples. It is found in formal inscriptions and iconography on temple walls, obelisks, large stone shrines and small sacred objects. It is also extant in manuscript inscriptions on papyrus. Both vocal and instrumental music are well represented.[22]

Three papyrus manuscripts from the early Twenty-Second Dynasty (*c.*945–*c.*715 BCE, roughly Iron Age IIA and IIB) preserve details of the ritual for the daily offering to the deities Mut and Amun at Karnak in ancient Thebes.[23] One of the items in the ritual is the adoration of the deity. This is performed in two consecutive actions. In the first the officiating priest bows down before the sacred image and kisses the ground; in the second he assumes a half-standing, half-kneeling position before the sacred image, raises his arms in a gesture of homage and sings hymns. The 66 items comprising the order for the ritual of the daily offering to Amun at Karnak, as given in Papyrus Berlin 3055, include five which are hymns for the Adoration of Amun (items 37–41). The position assumed by the priest while singing the hymns can be appreciated from an illustration on a sandstone stela from Thebes which shows a man with raised arms singing a hymn in adoration of the sun-god Ra, as explained in the surrounding hieroglyphs (Stela UC 14231, Museum of University College London). It is possible that the singers were accompanied by plucked-string instruments (harps or, from the Middle Kingdom – *c.*2010–*c.*1630 BCE – onwards, lyres[24]), but it is unlikely that the dutiful performance of the daily rituals would have called for the high level of musical activity represented by the paintings and carved reliefs which decorate the walls of the Theban temples and tombs. The scenes depicted there clearly belong to more festive occasions.

An example of a ritual occasion on which there was a somewhat higher level of musical activity than that which might be expected at the daily rituals is found in a relief from the Theban tomb of Ramose, an Egyptian noble from the time of the New Kingdom (*c.*1539–*c.*1069 BCE). It depicts three male singers walking side by side, arms and hands outstretched in formal gestures of adoration, leading a procession during a sacrificial rite at which slaughtered animals are offered to the sun-god Amun-Re.

An increasingly higher level of musical activity could also be expected at rites surrounding the worship of the one sun-god, the Aten, during the reign of Akhenaten (§1.2.2.1, n. 2).[25] The texts of two hymns to the Aten survive from the latter part of the Eighteenth Dynasty. The longer and more famous of these is Akhenaten's justly celebrated Great Hymn to the Aten. It survives in hieroglyphs inscribed on a wall of the tomb of the courtier (later pharaoh) Ay in Amarna. The hymn was in all probability sung whenever and wherever worship was offered to the deity during the time of Akhenaten.[26]

Music was a significant element in religious festivals. Festivals were frequently and widely celebrated throughout Egypt from at least the time of the earliest records (Teeter 2011: 56–58). Nevertheless, evidence about how festivals were conducted does not begin to appear until after the period of the Old Kingdom (*c.*2686–*c.*2160 BCE).[27] By no means all festivals were celebrated on the scale of the larger Theban ones; the number of singers, instrumentalists and dancers involved in festivals is therefore likely to have varied considerably in proportion to the scale of and popular participation in the respective celebrations. It is probably appropriate to envisage levels of musical activity ranging from a minimum of two singers[28] to the multitudes of singers (female as well as male) and instrumentalists (playing a variety of instruments) who took part in processions at the two great annual Theban festivals known as the Beautiful Festival of the Valley and the Opet Festival (§2.3.5 with n. 38; §2.4.4).

The cult of the kings engendered many hymns honouring their magnificence and praising them for their great deeds. Hymns to a king were performed – probably sung – during the king's reign and after his death for as long as his cult was maintained. The liturgies and rituals during which the hymns were sung may sometimes have included or consisted of stylised re-enactments of significant events in the king's life. The hymns may also have been sung at ceremonies when statues of the king, or stelae recording his life and works, were erected.[29]

A sequence of hymns to King Senusret III (reigned *c.*1870–*c.*1831 BCE), which may well have been written and sung during his lifetime, is preserved in manuscript on one side of a sheet of papyrus found near Lahun in Middle Egypt.[30] The hymns contain no reference to music, but one of them is furnished with a refrain, identified as such, consisting of a single line written only once, after the conclusion of the hymn. Since each line of the eight-line hymn is a self-contained affirmation of joy over a respective aspect of the king's greatness, the refrain is very likely intended to be uttered after each line. The likelihood is increased by the formulaic construction of each

line of the hymn, which provides an unmistakable cue for a refrain.[31] The presence of a refrain does not in itself imply musical rendition, of course, but musical rendition enhances the distinction between 'verse' and refrain such that the meaning of the text is thrown into sharper relief than when the whole is merely spoken. The enhancement which musical rendition provides would be particularly valuable in a situation where the whole text (hymn and refrain) were delivered throughout by a soloist or a group.

Music was also a feature of funerary rites in ancient Egypt.[32] This is evident not only from literary sources, but also from scenes of musical performance in the wall paintings and carved reliefs which decorate the interiors of many mortuary temples and tombs from the Middle Kingdom onwards. However, not all such musical scenes would have reflected musical performance at the funeral rite itself. It is therefore important not to confuse musical scenes which belong to representations of the deceased's achievements and lifestyle before death with those that belong to the performance of mortuary rites. The only reasonably certain indications of musical activity during the ritual of interment, after the funeral procession had arrived at the place of burial, are the texts of hymns and intonations which were sometimes inscribed among the 'pyramid texts' on the interior walls of burial rooms and their antechambers in pyramids.[33] When these are read in conjunction with relevant wall decorations, it seems highly probable that the hymns and intonations were sung or chanted to the accompaniment of harp or lyre.

2.3 Music in processions

2.3.1 Introduction

Whereas civic processions were primarily politically motivated displays of wealth, power and status, designed to inspire pride, loyalty and solidarity in the native population, and envy and fear in foreign potentates, religious processions were ceremonial ritual journeys representing transition from one state of awareness, or state of being, to another: from the mundane to the transcendent. Distinctions between civic and religious processions were less clear-cut in practice than as just described, although the respective underlying distinctions remained the same. In cultures where emperors or kings were deemed to have divine qualities, civic processions inevitably had a religious aspect which to some degree modified their boastful pomp; and conversely, in the more extravagant religious processions, which typically took place out of doors for all to see, there was always a certain element of propaganda.

2.3.2 Israel and Judah

In the HB, processions are described as taking place out of doors, as being noisy and energetic and as accompanied by singing or the playing of

instruments or both. In HB 1 Samuel 10 the description of a 'band of prophets' coming down from a high place presents what is probably a fairly typical picture:

> After that you [Saul] shall come to Gibeath-elohim [or 'the Hill of God' (NRSV margin)], at the place where the Philistine garrison is; there, as you come to the town, you will meet a band of prophets coming down from the shrine [*bamah*] with harp [*nebel*], tambourine [*tof*], flute [*ḥaliyl*], and lyre [*kinnôr*] playing in front of them; they will be in a prophetic frenzy.
>
> (HB 1 Samuel 10.5)

In HB 2 Samuel 6, the removal of the 'ark of God' from the house of Abinadab to the house of Obed-edom, and from there to 'the tent that David had pitched for it' in the 'city of David', is described in terms of two energetic processions accompanied variously by the sound of musical instruments and cultic shouts:

> They carried the ark of God on a new cart, and brought it out of the house of Abinadab, which was on the hill … David and all the house of Israel were dancing before the LORD with all their might, with cypress wood [instruments][34] and lyres [*kinnorôt*] and harps [*nebaliym*] and tambourines [*tuppiym* 'hand drums'] and castanets [*menaʿaneʿiym* 'rattles'] and cymbals [*tseltseliym*].
>
> (HB 2 Samuel 6.3, 5)

> David went and brought up the ark of God from the house of Obed-edom to the city of David with rejoicing; and when those who bore the ark of the LORD had gone six paces, he sacrificed an ox and a fatling. David danced before the LORD with all his might; David was girded with a linen ephod. So David and all the house of Israel brought up the ark of the LORD ⌊with shouting⌋ [*biterûʿah*], and with the sound of the trumpet [*shôfar* 'horn']. … They brought in the ark of the LORD, and set it in its place, inside the tent that David had pitched for it; and David offered burnt offerings and offerings of well-being before the LORD.
>
> (HB 2 Samuel 6.12b–15, 17)

In the narrative of the removal of the ark from the 'city of David', Zion, into the Temple (HB 1 Kings 8.1–13) there is no mention of music.

The narrative of the anointing of Solomon (HB 1 Kings 1.38–45) includes a passage that gives an idea of the sound of a procession:

> And all the people went up following him [Solomon], ⌊playing on pipes⌋ [*baḥaliliym* 'with pipes'] and rejoicing with great joy, so that the earth quaked at their noise.
>
> (HB 1 Kings 1.40)

Music of the pipe is also mentioned by First Isaiah as accompanying movement – perhaps in procession – to the temple:

> and [you shall have] gladness of heart, as when one sets out ⌊to the sound of the flute⌋ [*beḥaliyl* 'with pipe'] to go to the mountain of the LORD, to the Rock of Israel.
>
> (HB Isaiah 30.29b)

Psalm 68 in the HB contains a short description of processions (explicitly designated as such) at the Jerusalem Temple:

> Your solemn processions are seen, O God,
> the processions of my God, my King, into the sanctuary –
> the singers [*shariym*] in front, the musicians [*nogeniym*] last,
> between them girls playing tambourines [*tôfefôt* 'hand drums'].[35]
>
> (HB Psalm 68.24[25]–25[26])

The wording of the passage, especially its use of the plural form 'processions' (*haliykôt* literally 'goings', singular *haliykah*), gives the impression that the direction of the processions, the number and composition of the participating groups of musicians, and the order of those groups were the norm at the time when the psalmist wrote. The 'singers' are not identified more precisely but may have been cultic singers at the temple. The 'musicians' (*nogeniym*) are likely to have been players on lyres.[36] In the text of the HB, 'hand drums' (*tôfefôt*, sometimes *tuppiym* as, for example, at HB 2 Samuel 6.5 quoted above) are typically associated with female players. Whether the Psalm might actually have been sung at the temple, perhaps during a procession, is an open question.

2.3.3 Anatolia

Evidence for music at processions in Anatolia is scant. Two polychrome reliefs in friezes round the outside of two vases from sixteenth-century BCE Anatolia depict stylised processional scenes with instrumentalists (Moore 2015: 16–18, 29–30). One of the reliefs, from İnandıktepe Vase A, second frieze, shows three female cymbal players, one man playing a lyre and one man playing a long-necked lute (Moore 2015: 123 with Figure 25; 124 with Figure 27). The other relief, from Hüseyindede Vase A, second frieze, depicting an outdoor procession to a temple, shows two musicians bringing up the rear (Moore 2015: 130 with Figure 42).

Two iconographic examples from around 500 BCE show men playing hand drums and lyres. In each example there are four men facing right and walking in line. In one of the examples, from Zincirli (Hittite: Yadiya; modern name: Sam'al), two lyre players precede two players on hand drums (Figure 4.1; Dumbrill 2005: 272, Plate 91). In the other example, from Azatiwataya (modern

name: Karatepe), a singer or player on a hardly identifiable short wind instrument (perhaps a syrinx) precedes two lyre players and a player on a hand drum (Dumbrill 2005: 272, Plate 92).

2.3.4 Mesopotamia

In 'The Building of Ningirsu's Temple' (Gudea Cylinders, *c.*2200–*c.*2100 BCE), lines 1176–1181 are concerned with a procession and have the following:

> to see that the **ala** drums and **balang** drum will sound in perfect concert with the **sim** drums, and to see that his [Gudea's] beloved drum *Ushumgal-kalama* [Serpent of the Land] will walk in front of the procession, the ruler who had built the E-ninnu, Gudea, himself entered [the temple] before Lord Ningirsu.
>
> ('The Building of Ningirsu's Temple' [Gudea Cylinders A and B], ETCSL 2.1.7, lines 1176–1181)

Drums are the only musical elements mentioned in connection with the procession. The meaning and significance of the names of the first three drums are uncertain. However, it was evidently important that they should sound well together. The fourth drum was special in that it was a favourite drum of Gudea and had a name, Ushumgal-kalama. It led the procession, implying that the other drums were part of the body of the procession.

At Emar the ritual for the consecration of the high priestess of the storm god of Emar, described in the text designated Emar 369, included a subsidiary rite, the 'shaving of the High Priestess'. This began with a procession to the temple of the storm god:

> On the second day there is the shaving of the high priestess. An ox and six sheep go to the temple of the storm god. The divine weapon and the priestess walk behind them while the singers walk in front of them. They reach the temple of the storm god and there at the gate of the courtyard they shave the high priestess.
>
> (Emar 369, trans. Hess 2009: 115)

Here singers are the only musicians mentioned; they led the procession.

Processions with lyres and harps are attested iconographically. A stone relief from Assyria, dated *c.*1000–*c.*1500 BCE, shows a procession with lyres (Dumbrill 2005: 275, Plate 101). Processions with harps are shown on a steatite vase from Adab (modern name: Bismaya), dated to *c.*3000 BCE (Dumbrill 2005: 198, Plate 24), and on stamped terracotta items from Eshnunna (modern name: Tell Asmar), dating to 2000–1500 BCE (Dumbrill 2005: 199–201, Plates 26–29), depicting soldiers playing harps held horizontally.

2.3.5 Egypt

Processions are known to have been a part of religious life in ancient Egypt from at least the Early Dynastic period (*c.*2950–*c.*2575 BCE) onwards, although sources from as early as the third millennium BCE provide relatively little information about them. Later sources, from the New Kingdom (*c.*1539–*c.*1069 BCE) and the Third Intermediate period (*c.*1069–*c.*664 BCE), show that processions consisting variously of male singers, priests and groups of female singers, going round and into temples, were common. Male singers might process in groups.

Female singers attached to temples would typically have titles reflecting the places and objects of their service: for example, 'Chantress in the Temple of Amun' or 'Chantress of Osiris'. A wall text from the Ramesside period, related to the second occupant of the tomb of Djehuty/Djehutyemheb (designated TT45), refers to that occupant's wife as 'chantress of the Theban triad [Amun, Mut, Khonsu]' and characterises his five daughters as singers 'of Amun'.[37] Some of them were eligible to accompany the priests into the innermost sacred parts of temples. This distinction was reflected in titles such as 'Singer in the Interior [of the Temple of] Amun' (Teeter 2011: 17, 27–28). They typically played sistrums (§5.2.3.2) and menats (§5.2.3.4).

Large and colourful outdoor processions were prominent features of the Beautiful Festival of the Valley and the Opet Festival, celebrated annually in Thebes from the time of the Middle Kingdom and New Kingdom, respectively. Each festival lasted for two days. The participation of musicians in the festivals and their processions is attested in scenes carved in relief and painted on the walls of the temples of Karnak and Luxor on the eastern bank of the Nile, and on the walls of burial chambers and mortuary chapels in the Valley of the Kings, in the Temple of Queen Hatshepsut at Deir el-Bahri and at other sacred locations on the west bank of the Nile opposite the Karnak and Luxor temples.[38] Singers and players on a variety of instruments, including long-necked lutes, clappers, harps, sistrums and the slung drum are depicted (Figure 2.1; Manniche 1991: 71, Figure 40; 72, Figure 41). Clappers and players of plucked-string instruments could also be singers (Figure 2.1).

The funeral procession was an important item in funerary rites. It was the solemn journey of the body of the deceased from the place of its embalming and mummification to the place of its interment. The funeral procession was accompanied by singers and professional mourners in addition to friends and relatives of the deceased. The singers, who might be male or female, sang lamentations. The professional mourners, who were most usually groups of women, made lamentation and wailing, bared their breasts and sprinkled dust in their hair in the customary formal expressions of grief (Wickett 2010: 145–170; Teeter 2011: 137–139).[39] A wall painting in the tomb of the Egyptian official Neferhotep I (TT6), dating to the Eighteenth to Nineteenth Dynasty (*c.*1539–*c.*1190 BCE), shows a group of female funerary musicians on their way to meet Neferhotep's cortège, some of them playing hand drums (Wickett 2010: 146, Illustration 28). A wall painting from

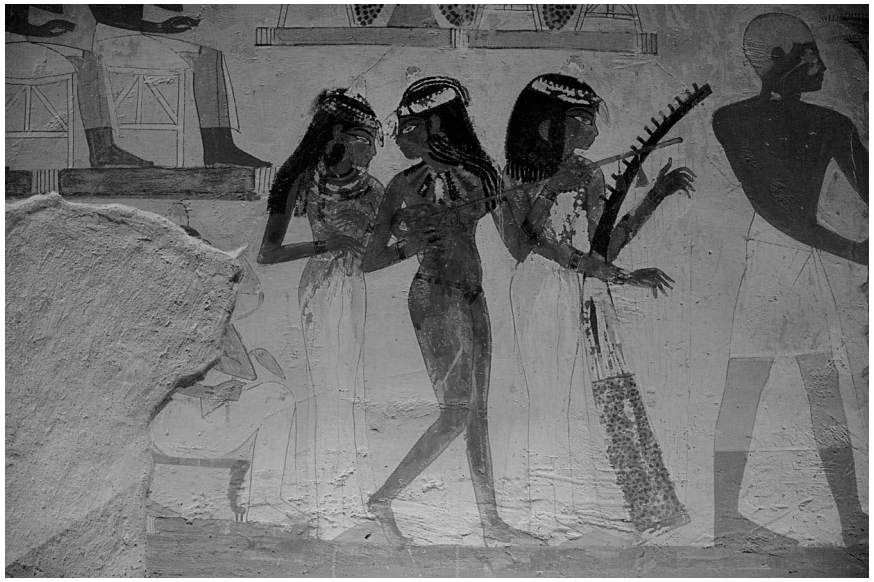

Figure 2.1 Three female musicians playing (from L to R) double pipe, long-necked lute, harp. Scene from celebrations at the Beautiful Festival of the Valley. Image on the west wall of the tomb of Nakht, Thebes (TT52), Eighteenth Dynasty.

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the tomb of Ramos (TT55), an Egyptian vizier of the same period, shows a funeral procession with segregated groups of female and male mourners.

Festivals of Osiris contained several elements common to funerary rites since Osiris was the foremost deity of death and the afterlife (Snape 2011: 117–135; Eaton 2013: 12–13).[40] Worthy of note in this connection is the procession from the temple of Osiris at Abydos out to and returning from the tomb of Osiris in the nearby necropolis. Records from the Middle Kingdom and the Roman era show that the procession was a grandiose affair which included dancing (see below) and no doubt singing and formal expressions of grief of the kind otherwise customary in funeral processions (Teeter 2011: 58, 60–62).[41]

2.4 Music and cultic dance

2.4.1 Israel and Judah

Two passages in HB 2 Samuel 6, which refer to music as an element in the processions described in the narrative of the removal of the 'ark of God' to Zion (quoted earlier), also refer to dance in the same contexts.[42] The references to dance are as follows:

> David and all the house of Israel were dancing [*mesaḥaqiym*] before the LORD with all their might.
>
> (HB 2 Samuel 6.5a)

> David danced [*mekarker* '(was) whirling' (NJPST)] before the LORD with all his might; David was girded with a linen ephod.
>
> (HB 2 Samuel 6.14)

The translation 'whirling' in verse 14 above is significant in relation to Assyrian vocabulary and a Mesopotamian text (see below).

Psalm 30.11[12]–12a[13a] in the HB includes a reference to dancing as a metaphor for joy. That the metaphor is used in close textual proximity to a reference to making music suggests the association of dancing and music:

> You have turned my mourning ⌞into dancing⌟ [*lemaḥôl*];
> you have taken off my sackcloth and clothed me with joy,
> so that my soul ⌞may praise⌟ [*yezammereka* 'may make music (to)'] you and not be silent.
>
> (HB Psalm 30.11[12]–12a[13a])

The opening of verse 4[5] of HB Psalm 30, which commands the LORD's faithful people to '⌞sing praises⌟' (*zammerû* 'make music, play') to him, both emphasises the musical element and implies that the psalmist had the context of worship in mind.

The texts at HB Psalms 149.3 and 150.4 associate dance (*maḥôl*) with song and the sound of the hand drum, lyre, 'harp', end-blown flute and cymbals, in cultic worship in Judah. Those two psalms are post-exilic but probably reflect age-old customs as far as cultic dance is concerned.

The closing verse of HB Psalm 87, a psalm extolling the greatness of Zion, the 'city of God', sees singers and dancers united in praising that holy place. The psalm gives no indication of a location other than the city itself, but since the city was revered and praised because it was where the deity was deemed to dwell, there seems little doubt that the dancers envisaged in the psalm would have been cultic dancers:

> Singers and ⌞dancers alike⌟ [*keḥoleliym*] say,
> 'All my springs are in you [the city of God, Zion].'
>
> (HB Psalm 87.7)

The story of the golden calf, in the biblical narrative of the Israelites' wilderness wandering, has the Israelites turning to idolatry when Moses, their strong leader, is absent from them for an unusually long time (Exodus 32.1–35). According to the story, the Israelites' worship of a newly made golden figure of a calf – their popularly desired, tangible, visible god – included sacrifices and a festival at which there was dancing, as Moses saw on his return:

> As soon as he [Moses] came near the camp and saw the calf ⌞and the dancing⌟ [*ûmeḥolot* 'and the dances' (plural)], Moses' anger burned hot …. [20] He took the calf that they had made, burned it with fire, ground it to powder, scattered it on the water, and made the Israelites drink it.
>
> (HB Exodus 32.19)

A verse from the biblical story of how the prophet Elijah pitted the powers of the deity of the Israelites against Baal at Mount Carmel and showed Baal to be completely ineffectual (HB 1 Kings 18.20–40) suggests that cultic dance was used in the worship of Baal in ancient Israel:[43]

> So they [the prophets of Baal] took the bull that was given them, prepared it, and called on the name of Baal from morning until noon, crying, 'O Baal, answer us!' But there was no voice, and no answer. They limped [*wayepassḥû*] about the altar that they had made.
>
> (HB 1 Kings 18.26)

That the worshippers of Baal 'limped' round the altar most likely refers to a kind of stepping ritual dance; the NIV has 'danced', the NJPST has 'performed a hopping dance'.[44]

To what extent the stories from which the last two quotations above are taken represent actual historical events is open to debate. As far as idolatrous worship is concerned, it is probably safe to assume that the stories reflect practices familiar both at the time when the written texts of the Torah and the Deuteronomistic History were assembled in the latter part of the pre-exilic period and earlier (although how much earlier is impossible to know).

2.4.2 Anatolia

There is little concrete information about Anatolian cultic dance and the music associated with it. It is possible that traditions were variable and that any one instrument or group of instruments associated with dance and specific cultic circumstances (for example, drums, cymbals, plucked-string instruments) might participate. Ora Brison proposes that a certain type of plucked-string instrument, 'probably a lute', was used to accompany singing and dancing, 'including funerary ritual dances', in Anatolia (Brison 2014: 192). The probability is strengthened by the depiction, in a stone relief, of a long-necked lute in a convivial domestic situation (possibly portraying dancing), where also double pipe and crotals are played (§3.2.2). Expressions of 'rejoicing' and 'joy' in connection with cultic festivals seem to have been 'manifestations of joy and exuberance, probably consisting of song, music and dance' performed by female cultic personnel (Cammarosano 2018: 43–44 [Section 3.4.7], 122–124 [Section 5.5.5.1]).

2.4.3 Mesopotamia

Despite the many references to dance and dancing in Mesopotamian literature, few are sufficiently specific to indicate whether cultic or non-cultic dance is meant. Iconographic remains generally provide a clearer idea of the nature or context of any dancing they may depict, but even here interpretation can be difficult.[45]

Large numbers of acrobatic dancers, *huppûm*, are attested in the Sumerian city of Larsa and the Assyrian city of Mari during the period from about 1950 BCE to about 1750 BCE. It seems that they performed especially energetic dances as set pieces in imitation of close combat. The *huppûm* are known to have danced before the god Shamash at Larsa and during cultic festivals in Mari, although it is not clear whether their dancing at Mari was part of the cultic rites themselves.[46]

A significant text is found in an Akkadian mythological poem from the first half of the second millennium BCE known as *The Song of Agushaya* or simply *Agushaya*. Agushaya was the ancient Akkadian, Assyrian and Babylonian goddess of fertility, love, copulation and war; she was also known as Ishtar. Although *Agushaya* includes aetiological and mythological elements, it is basically a poem in praise of Ishtar under a different name.[47]

In *Agushaya*, Tablet II, part vii, the god Ea commands that a 'whirling dance' be part of an annual festival in remembrance of Ea and the goddess Ishtar jointly:

> The reason Saltu [a double of Ishtar, created by Ea] was made and created is
> That people of future days might know about us.
> Let it be yearly,
> Let a whirling dance be established among the feast days of the year.
> Look about at all the people!
> Let them dance in the street,
> Hear their clamour!
>
> (Foster 2005: 105)

Those lines have been seen as an aetiology for the performance of a wild dance at the annual festival to which they refer. It is possible that they describe actual cultic dance since the myths of the deities were celebrated in cultic festivals. The phrase translated 'whirling dance' in the fourth line above is expressed by the word *gushtum* 'wild' (a wordplay on the name Agushaya) and the verb *mēlulu* 'play, dance', which is cognate with Assyrian *ḫiylu* 'writhe' (in fear) and Hebrew *ḥûl*, *ḥiyl* 'whirl, dance, writhe' and *maḥol* 'whirl, dance'. These points are of interest in relation to the earlier quotations concerning sacred dance in ancient Israel and Judah.[48]

2.4.4 Egypt

Dance was an important element in Egyptian daily life. Its association with religious life is amply attested in wall paintings and reliefs in temples and tombs

where it is shown as belonging particularly to sacred rites and joyous processions, especially those of the Beautiful Festival of the Valley and the Opet Festival. In those settings, dance was exuberant and sometimes frenzied, typically accompanied by instruments and handclapping. Dance with song and musical instruments was also a feature of funerary rites, occurring either in the funeral procession or at the entrance to the tomb (Spencer 2003: 115, 117). Troupes combining dancers, singers and handclappers performed in temples and palaces, at obsequies and also on joyful occasions. Such troupes, known as *ḫnr* (*khener*), were prevalent during the Old Kingdom, *c.*2575–*c.*2125 BCE (Lawergren 2001: 452).[49] Although dance at the festivals named above was performed by men and women alike, there is pictorial and written evidence to suggest that dance under certain circumstances, and certain kinds of dance, were gender-specific (e.g. Figure 2.2).

It was noted earlier in this chapter that in Egyptian sources from the New Kingdom (*c.*1539–*c.*1069 BCE) and the Third Intermediate period (*c.*1069–*c.*664 BCE), women are often mentioned as singers attached to some of the larger temples (§2.3.5). Sources from those periods also mention women as dancers. As with the female singers, the female dancers are sometimes referred to as belonging to, or associated with, particular deities, for example, 'dancers of the Foremost of the Westerners [namely Osiris]' or 'dancers of

Figure 2.2 Thebes. Two *muu* dancers. Wall painting, Thebes, tomb of Rekhmire (TT100), *c.*1410 BCE.

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Min [god of fertility]'. Such references probably imply that the women were dancers at the cultic rituals of the deities named (Teeter 2011: 27–28).

However, the same papyrus from the temple complex at Lahun which provides information about singers at festivals there during one particular year of the Twelfth Dynasty (§2.2.4 at n. 28) also provides information about dancers at those festivals. The dancers, like the singers, are named and are male. Two, sometimes three, dancers were on duty in each shift or 'watch'.[50]

References to dancing in documents describing the Osiris Festival at Abydos suggest that some kind of ritual dance took place at the point in the proceedings when the festival procession had reached the tomb of Osiris and the 'funeral rites' of Osiris were acted out. It is possible that there was also ritual dance earlier in the procession when a station was made for the enactment of the myth of the murder of Osiris and its triumphant avenging by the gods Horus and Toth (above at n. 40, n. 41; Teeter 2011: 61–62).

A particular kind of funerary dance was performed by the *muu*. The *muu* were male dancers who sometimes 'wore tall basketwork headdresses in imitation of archaic marsh dwellers'; their dance was 'thought to help ferry the deceased across waters to the afterlife', and was performed at the entrance to the tomb (Teeter 2011: 144–145, 206 n. 59 and literature). A depiction of four *muu* dancers in a wall painting at the entrance to TT60, the tomb of Antefoker (*or* Intefiqer), a Twelfth Dynasty Egyptian noble, shows them wearing their characteristic headdresses (Teeter 2011: 145, Figure 61); a wall painting from TT100 shows them without (Figure 2.2). The *ḫnr* also performed in funerary contexts.

It is possible that the *muu* combined musical elements with their dancing, in the manner of the *ḫnr*, but written information is lacking and the iconography is not always clear.

Notes

1 Relevant to HB Amos 5.21–24 is HB Amos 1.2: 'The LORD roars from Zion, and utters his voice from Jerusalem.' Relevant to HB Isaiah 30.29 is HB Isaiah 30.19: 'Truly, O people in Zion, inhabitants of Jerusalem, you shall weep no more.'
2 Verses 21–22 are possibly displaced from between verses 6 and 7 (see note on HB Isaiah 38.21–22 in HCSB).
3 See the note on HB Isaiah 38.9–21 in HCSB. In the course of that note the poem of thanksgiving in Isaiah 38 is compared to Psalm 30 (pre-exilic), which it closely resembles in form, language and likely purpose.
4 The phrase 'we will play' in HB Isaiah 38.20b translates Hebrew *nenagen*, which is first person plural imperfect of the verb *nagan* 'touch, pluck, strum (strings), play (a plucked-string instrument)'. *Nagan* is associated with the *kinnôr* 'lyre' in pre-exilic biblical literature at HB 1 Samuel 16.16, 23 and HB Isaiah 23.16. The association may also apply here (see Smith 2011: 43–44).
5 The dating of psalms of the HB in the following discussion follows Gillingham 1994: 252–255. Dating individual psalms is highly problematical and there is little consensus among scholars, even where broad dating to the pre-exilic, exilic and post-exilic periods is concerned. Examples of the problems involved and the different opinions expressed are given in Day 2004a: 224–229. While Day's primary focus is on identifying pre-exilic psalms (2004a: 224–250; but he does say that he

cannot cover all possible pre-exilic psalms [2004a: 237]), he also discusses criteria for identifying exilic and post-exilic psalms. Day's datings differ from Gillingham's in several instances.

6 In the following discussion, account is not taken of any superscriptions or internal rubrics (*higgaion*; *selah*) attached to HB psalms since these are reckoned to be late (post-exilic) additions.

7 NJPST, marginal note *j* to HB Psalm 18.34.

8 Each of the portions HB Psalms 7.17a[18a]; 30.4b[5b]; and 75.1[2], uses a form of the verb *yadah* 'acknowledge, confess, give thanks, stretch out the hand', which is regarded by some as belonging to ritual worship: BDB: 392–393, at the entry *yādāh*.

9 A rabbinic tradition holds that HB Psalm 137 was written in Judah after the exile but before Jerusalem and the temple were rebuilt. This view is dependent on interpreting the Hebrew word *sham* 'there', in verses 1 and 3, as implying that the psalm was written both after the time of the situation it describes and elsewhere than in Babylonia: see Gillingham 2013a: 65. However, Gillingham points out (ibid., n. 3) that the word *sham* 'can denote present experience as well [as past]', citing HB Psalms 48.6[7] and 76.3[4] as examples.

10 The beginning of HB Psalm 45.6a[7a], translated variously 'Your throne, O God' (NRSV [not margin]; RNJB; and similarly in NIV and KJV) and 'Your divine throne' (NJPST), is problematical. 'Your throne' is expressed in the Hebrew by the word *kisʾaka*, and the divine element by the word *ʾelohiym*. According to the inherent logic of the Psalm, the king is the addressee in verses 1[2]–9[10]. In verse 6[7] 'Your […] throne' refers to the king's throne and to the king as addressee. The gratuitous vocative interpolation 'O God' in the KJV, NRSV, NIV and RNJB translations of verse 6a[7a] (which is how those translations render the Hebrew word *ʾelohiym*) disrupts that logic by giving the impression that the throne is God's and that God is the addressee. The translation in the NJPST blurs the logic by implying that the king's throne had been God's throne and therefore that the king was divine. Perhaps a formulation such as 'Your God-given throne' might bring out the sense more clearly. However, compare Smith 2003: 151–166, especially 157–162; and RNJB Psalm 45.7, note a.

11 On royal participation in and presidency at cultic rituals in second-millennium Anatolia, see Taracha 2017. In the following four and all subsequent passages quoted from ANET, untranslated italicised words are technical terms of more or less uncertain meaning; parentheses enclose translators' glosses.

12 On the three types of musical instrument, see §5.1.2, §5.1.3 and §5.2.1.1.

13 General description with relevant bibliography in Dumbrill 2005: 117–118. In addition to the 30 or so tablets referred to here, there are some 40 fragments. The 30 tablets are identified by two partly parallel systems of designation: 'h.' (Hurrian) for whole items, and RS (Ras Shamra), plus an appended lower-case letter, for fragments. For discussion of the musical aspects, see Chapter 7.

14 For example, the text of h.5 (R.S. 14.18): Dumbrill 2005: 141–142.

15 On Kesh and the 'Kesh Temple Hymn', and for a printed version of the translation from which the present quotation is taken, see Black et al. 2004: 325–330. Several of the translations from ETCSL excerpted below are also printed in that work. The location of Kesh is unknown. Its name may possibly be a dialect form of Kish, the name of an ancient southern Sumerian city, with which it should be identified.

16 The translation 'Red-Eyed Lord' is from Selz 1997, cited in Franklin 2016: Section 2, n. 68.

17 The word 'they' here and at the beginning of the last line quoted refers to Inana's 'black-headed' people (i.e. Sumerians). 'Black-headed ones' is how the Sumerians referred to themselves (Hallo and Simpson 1998: 29).

18 'A Sumerian Lamentation', ANET, 455–463; also as 'The lament for Urim [= Ur]', ETCSL 2.2.2. Links to translations and transliterations of four further laments for cities are provided in ETCSL at: http://etcsl.orinst.ox.ac.uk/cgi-bin/etcsl.cgi?text=c.2.2*#.
19 ETCSL (http://etcsl.orinst.ox.ac.uk/edition2/etcslbycat.php) contains the texts of 27 hymns to Mesopotamian deities. On Mesopotamian hymns to deities, see Ziegler 2011: 303.
20 Translation from 'A Hymn to Inana for Ishme-Dagan' (Ishme-Dagan K) ETCSL 2.5.4.11, line 45. The passage is also quoted in translation by Ziegler 2011: 303, who cites it along with other sources. Ziegler's translation differs slightly from that given in ETCSL.
21 Part of this passage is also quoted in translation by Ziegler 2011: 303–304, who cites it along with other sources. Ziegler's translation differs slightly from that given in ETCSL.
22 On religious and musical aspects of ancient Egypt, see especially: Manniche 1991; DEU; Teeter 2011.
23 Berlin, Egyptian Museum and Papyrus Collection, nos. 3014 and 3053 (ritual for Mut) and no. 3055 (ritual for Amun). Images and associated hieroglyphic inscriptions from the temple of the cult of King Sety I (reigned *c.*1290–*c.*1279 BCE) at Abydos, and other sources (which, however, are narrower in scope than the three listed at the beginning of this note), provide complementary information about how various individual parts of the ritual of the daily offering may have been conducted. See DEU at: www.digitalegypt.ucl.ac.uk/religion/dailycult.html; Teeter 2011: 46–51.
24 Lyres are reckoned to have been imported into Egypt from Asia, probably during the Middle Kingdom (late Eleventh Dynasty, *c.*2010–*c.*1938 BCE): Manniche 1991: 37–38 (with drawing), 47. See also Manniche 1991: 42–43 (a line drawing of a musical scene from a section of a wall painting in TT38 [New Kingdom, Eighteenth Dynasty (*c.*1539–*c.*1514 BCE)], showing several musicians including a harpist and a lyre player).
25 A schematic drawing of Akhenaten's temple to the Aten at Akhetaten is reproduced in Teeter 2011: 49, Figure 19.
26 For authoritative modern editions of the hymn, see ANET: 369–371; Lichtheim 1976: 96–100 (commented and annotated translation); DEU, www.ucl.ac.uk/museums-static/digitalegypt//amarna/belief.html (introduction, transliteration and translation). For an analytical examination of parallels between the hymn and HB Psalm 104 (some of which are briefly noted marginally in ANET: 369–371), see Day 2013.
27 DEU, 'Festivals in the Ancient Egyptian Calendar', at: www.digitalegypt.ucl.ac.uk/ideology/festivaldates.html. The religious calendar in ancient Egypt was divided into three seasons called *akhet* 'inundation' (flood/spring, the first season of the year), *peret* 'coming forth' (summer) and *shemu* 'deficiency' (harvest, autumn/winter), respectively. Each season had four months of 30 days each; in addition there were five intercalary days to make up the total number of days from 360 to 365. The calendar was based on the agricultural year; it was a compromise between the lunar calendar and the civil calendar of 365 days. See the website cited at the beginning of this note, and Miano 2010: 30, 33.
28 Papyrus UC 32191; see DEU, 'A Late Middle Kingdom Account, Listing Festivals', at: www.digitalegypt.ucl.ac.uk/lahun/festivallistmk.html.
29 DEU, 'The Cult of the Reigning King in Ancient Egypt', at: www.digitalegypt.ucl.ac.uk/ideology/king/cult.html#1; compare Teeter 2011: 42–46, 92–96.
30 DEU, 'Hymns to King Senusret III (1872–1853 BC)', www.digitalegypt.ucl.ac.uk/lahun/kinghymns.html, where a transliteration and a translation of the papyrus referred to here (Papyrus UC 32157) are available. The papyrus manuscript was

discovered during Flinders Petrie's excavations at Lahun in Middle Egypt in 1889. The manuscript may be later than the time of Senusret III.

31 DEU, 'Hymns to King Senusret III (1872–1853 BC)', 'Part Two: rejoicing over the king', at: www.digitalegypt.ucl.ac.uk/lahun/kinghymns.html, where the hymn and its refrain are translated as follows:

> How the […] rejoice, for you have made their offerings flourish
> How the […] rejoice at your […], for you have drawn up their border
> How the […] in the presence rejoice, for you have enlarged their shares
> How the Egyptians (?) rejoice at your strong arm, for you have protected [their?] traditions
> How the nobles rejoice at your activity, for your power has grasped [their?] prosperity
> How the two riverbanks rejoice at your dread, for you have extended their domain
> How your recruits at levy rejoice, for you have caused them to flourish
> How the two lands rejoice at your might, for you have protected their walls
> its refrain: Horus extender of his border, may you repeat eternity.

32 Ancient Egyptian attitudes to, and customs connected with, death and burial are discussed in Teeter 2011: 119–147. See also Snape 2011.

33 The interment ritual typical of the New Period is described in detail in Teeter 2011: 139–145. Concerning earlier pyramid texts (from the Old Kingdom, *c.*2575–*c.*2125 BCE), see Malek 2003: 102; Wilkinson 2010: 88.

34 'with cypress wood [instruments]': thus the NJPST. The NRSV has 'with songs' (following the LXX and Dead Sea Scrolls 4Q Sam[a]), which harmonises with the Hebrew *beshiyriym* 'with songs' in the parallel passage at HB 1 Chronicles 13.8. HB 2 Samuel 6.5 has *ʿatsey berôshiym* 'with cypress (*or* "fir" *or* "ash") trees' or 'with cypress (*or* "fir" *or* "ash") woods'. See also the annotations on the whole of this passage in Smith 2011: 38. Compare §2.3.3 at n. 34; and §4.2.2.1.

35 See the wider context provided by HB Psalms 68.4a[5a], 24[25]–26[27], 32[33].

36 The Hebrew *nogeniym* is cognate with the verb *nagan* 'touch, pluck, strum (strings), play (a plucked-string instrument)' which, as is noted in n. 4 herein, is associated with the *kinnôr* 'lyre' elsewhere in pre-exilic biblical literature. See n. 4 herein and Smith 2011: 45.

37 TT45 is located in the necropolis at Sheikh Abd el-Gurnah on the west bank of the Nile, opposite Luxor. It was carved out and first occupied by Djehuty (a minor Egyptian official) at some time during the reign of Amenhotep II (*c.*1426–*c.*1400 BCE). It was later occupied by Djehutyemheb (apparently not a relative of the first occupant) from the time of Ramesses II (*c.*1279–*c.*1213 BCE). See www.osirisnet.net/tombes/nobles/djehouty45/e_djehouty45_01.htm [2014].

38 On the Beautiful Festival of the Valley, see: Manniche 1991: 71–72; Teeter 2011: 67–74. On the Opet Festival, see: Manniche 1991: 70–71; Teeter 2011: 56–57. A map of the Theban region in which the festivals took place is printed in Teeter 2011: p. xx (Map 2). For further on the Temple of Queen Hatshepsut at Deir el-Bahri and the depictions on the walls there of the processions at these two festivals, see Bryan 2003: 233; Wilkinson 2010: 212–214.

39 See also the descriptions of the tomb of Neferhotep II (TT216) at: www.osirisnet.net/tombes/artisans/neferhotep216/e_neferhotep216.htm ('The Longitudinal Chamber', subsection 'The right-hand wall').

40 The festivals of Osiris were also known as the Khoiak, the name of the month in which they were celebrated, the fourth month of the flood season (Teeter 2011: 58).

41 The Middle Kingdom evidence comes from the Ikhernofret stela, texts of King Neferhotep and monuments and stelae in Abydos (Teeter 2011: 58). English translations of the text of the Ikhernofret stela (Stela Berlin 1204) are available in: Breasted

1906–1907: 297–300 (Sections 661–670) and Lichtheim 1973: 123–125 (includes introductory material and text-critical notes).

42 See the quotations from HB 2 Samuel 6.3–5 and 12b–17, at §2.3.2.

43 According to HB 1 Kings 17.1–19.21 and 2 Kings 1.1–2.18, the prophet Elijah was active in Israel in the ninth century BCE during the reigns of kings Ahab and Ahaziah, a time of conflict between Baalism and Jahwism in Israel.

44 See the note on this verse in the NIV Study Bible and the HCSB.

45 On dance in Mesopotamia, see Kilmer 1997; Gabbay 2003; Ziegler 2011: 301–303. Iconography (hand drawn by Yumiko Higano) in Dumbrill 2005: 365–367.

46 Ziegler 2011: 301–302 (includes a photograph of a relief on an Old Babylonian period clay plaque now in the Louvre [AO 12443], showing two acrobatic dancers).

47 On *Agushaya*, and for translations, see: Foster 1996/1: 81–91; Groneberg 1997: 75–108; Foster 2005: 96–106; Lewis 2011: 31–55, 106–115.

48 On matters of aetiology and linguistics relevant to this portion of *Agushaya*, see: Foster 1996: 90, n. 1, 2005: 105, n. 1; Kilmer 1997: 2609; Gabbay 2003: 104 and n. 1; Lewis 2011: 31–55; Ziegler 2011: 303. See also the article [*ḥiyl*] *ḥûl* in BDB, 296–297.

49 On the *ḫnr*, see, in addition to Lawergren 2001 and Spencer 2003 (as cited), Grajetzki 2013: 233 n. 102; Morkot 2013: 940–942.

50 Papyrus UC 32191. See at n. 28 herein and the subsequent paragraph.

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3 Types of cultic activity and the music associated with them, 2

The preceding chapter discussed three of five types of cultic activity and their associated music (liturgies and rituals, processions, and cultic dance). The present chapter discusses the remaining two:

- mantic traditions; and
- warfare.

The inclusion of warfare in the list of types of cultic activity witnesses to the fact that in antiquity, to engage in warfare – whether proactively or defensively – was an act which was not only pragmatic but also religious. Victory was seen as impossible without the help of patronal deities, and many battle stories from early antiquity describe deities actively engaged in the fighting, using their superhuman powers to defeat enemies in epic style. The deities were appropriately thanked and honoured during victory celebrations. Defeat was seen as a result of the withdrawal of divine support consequent on the deities' displeasure with their mortal subjects.

3.1 Mantic traditions and music[1]

3.1.1 Israel and Judah

In the Hebrew Bible (HB) the scope of mantic activity in ancient Israel and Judah is fairly narrowly defined. It consisted of the mediation of the will of the deity to human beings through the agency of prophets, individuals acknowledged as appropriate to exercise that ministry.[2] Many of ancient Israel's acknowledged prophets are portrayed as having a high standing among their contemporaries. Especially noteworthy among the pre-exilic and exilic prophets are those whose activities and prophecies are known from the biblical books attributed to them: Amos, Isaiah (First and Second), Micah, Hosea, Zephaniah, Nahum, Habakkuk, Jeremiah, and Ezekiel. There are also many others whose prophetic ministry was important for the development of Israelite history and religion as it is charted in the Bible. They include Moses, Aaron, Nathan,

Elijah, and Elisha, and the women Miriam, Deborah, Huldah, Noadiah and an anonymous woman referred to simply as 'the prophetess' in HB Isaiah 8:3.[3] In addition, there were individuals who are referred to as prophets from time to time in the Bible, but who were not necessarily known first and foremost as prophets in their own day, such as Joshua, the Judges and Samuel. They were nevertheless respected and revered for their prophetic gifts as well as for their holiness, wisdom and qualities of leadership.

The HB text shows that in ancient Israel prophetic ministry was validated by the satisfaction of three requirements on the part of individuals: possession of prophetic gifts, acquisition of knowledge of the divine will through communication with the deity alone, and readiness to affirm that the delivered prophecies were messages from the deity. Satisfaction of the first of those requirements guaranteed the individual's ability to receive spiritual communications and deliver their content as formal prophecies, sometimes as extended oracles. Satisfaction of the second guaranteed the divine purity of the message: that it was not obtained through consultation with third parties (augurs, magicians, or soothsayers, for example) or through astrology, augury, extispicy, and the various other forms of divination widely practised in the ancient Near East, all of which were expressly forbidden to the Israelites.[4] And satisfaction of the third guaranteed the individual's integrity as a prophet.

The HB contains three direct references to the use of music in connection with the exercise of prophetic ministry. A passage from HB 1 Samuel 10, quoted earlier in connection with processions (§2.3.2), says that Saul will meet 'a band of prophets coming down from the shrine [*bamah* "high place"] with harp [*nebel*], tambourine [*tof* "hand drum"], flute [*ḥaliyl* "pipe"], and lyre [*kinnôr*] playing in front of them', and notes that those prophets 'will be in a prophetic frenzy' (HB 1 Sam. 10.5). The literal meaning of the conclusion of the verse is that the prophets 'will be prophesying', the verb hinting at, rather than specifying, a state of 'prophetic frenzy'. The tradition thus seems to envisage that the relationship of the instruments to the prophets is one of essential accompaniment to prophetic utterance.

The sound of the instruments may have helped to induce or prolong a state of ecstasy, frenzy, or some other kind of heightened spiritual awareness, in which prophetic utterance could occur. This is speculative as far as the narrative in HB 1 Samuel 10.5 is concerned, but the idea receives support from the passage that contains the second of the three direct biblical references to the use of music in connection with the exercise of prophetic ministry, and may indeed lie behind the scenario presented in 1 Samuel 10.5. The passage in question, HB 2 Kings 3.15–16, is concerned with the prophet Elisha. Its narrative context (HB 2 Kings 3) is that the kings of Israel, Judah, and Edom together seek out Elisha, a known prophet, to ask him to enquire of the deity whether they will be able to defeat their enemy, the king of Moab, in battle. Elisha begins his enquiry by calling for a musician:

> 'But get me a musician [*menagen* "player"]'. And then, while ⌞the musician⌟ [*hamenagen*] ⌞was playing⌟ [*kenagen*], the power of the LORD came on him. And he said, 'Thus says the LORD …'
>
> (HB 2 Kings 3.15–16)

The third of the direct references, in HB Ezekiel 33.32, suggests by means of a simile that the sound of instrumental music was intrinsic to the utterance of prophecy, and furthermore that the prophet himself (or herself) might provide it. Here the narrative context is the deity's warning to Ezekiel that the latter's prophetic messages to the Israelites will be met with apathy:

> To them [the Israelites] you [Ezekiel] are ⌞like a singer⌟ [*keshiyr* (or *keshar*)] of love songs, one who has a beautiful voice and plays well ⌞on an instrument⌟ [*nagen*]; they hear what you say, but they will not do it.
>
> (HB Ezekiel 33.32)

The three passages quoted above show that instrumental music was not merely an incidental accompaniment to prophetic utterance, but an intrinsic part of it insofar as it created an ambience, an exclusive aura, conducive to (and perhaps necessary for) the exercise of prophetic gifts. It is possible that in the last two of those passages the narrative traditions envisaged lyres as the musical instruments (§2.2.1, n. 4, second sentence).

The simile in HB Ezekiel 33.32, quoted above, suggests that prophecy could be delivered as song. The suggestion is supported by the fact that several prophetic oracles in the HB are accompanied by notices implying or stating that they are laments (*qiynôt*; singular: *qiynah*).[5] The lament (*qiynah*) was a formal poetic expression of deep sorrow and distress uttered as chant or song. This last observation, taken together with the points made above about the passages in HB 1 Samuel 10, 2 Kings 3 and Ezekiel 33, opens for the likelihood that the greater part of ancient Hebrew literary prophecy would have been delivered as chant or song.

3.1.2 Anatolia

There is a growing body of modern scholarship concerned with prophecy in Anatolia and its relationship to prophecy elsewhere in the ancient Near East (e.g. Beal 2004; Taracha 2009; Dijkstra 2015). In direct contrast to the nature of prophecy in Israel/Palestine as witnessed in the HB, prophecy in Anatolia operated through auguries and varieties of forms of divination. Divination rituals and magical rituals were often performed by women of various professions, including temple singers. Magical incantations could be performed without the involvement of specialist diviners (Taracha 2009: 151–152). But like prophecy among the ancient Israelites, the oracular sources were interpreted on the basis of questions addressed to them, formulated so as to elicit a 'yes' or 'no' answer (Beal 2004: 381) which the diviner would then communicate to the

original enquirer in the form of an oracle. The processes of divination and oracular utterance were generally conducted to the sound of musical instruments including lyres, drums and cymbals (Brison 2014: 186, citing Schuol 2004: 205; Franklin 2016: Section 6 at n. 25).

3.1.3 Mesopotamia

Information about Mesopotamian mantics and their activities has been preserved in letters inscribed on clay tablets from Mari and Assyria dating from the eighteenth century BCE, part of the very large number of tablets excavated in that region (Nissinen 2003: 13–16; Van de Mieroop 2015: Box 5.1). Those sources show that mantics, both men and women, constituted recognised, institutionalised groups in Mesopotamia. They were typically employed by royal households but were also associated with the local deities; thus they served not only kings and their courts but also local temples. Their work was to ascertain and communicate the will of the gods concerning the welfare of royalty and the upkeep of temples (especially in respect of new building and repairs). The substance of their oracles was based primarily on the interpretation of auguries, divination, dreams, and visions. The source texts have no single word meaning 'prophet' or 'prophecy'. Instead, mantics are identified by various terms related to their areas of responsibility, their specialisms, or the manner in which they would deliver their messages. The significance of some of the terms is not yet fully understood.[6] Much of what was said above about prophecy and divination in Anatolia applied also to Mesopotamia (Taracha 2009: 151–152).

The relevant letters (approximately 50 items) typically contain reports of instances of prophetic inspiration and of oracles that had been delivered by prophets. Interesting though the reports are from many points of view, the report style makes for difficulties in assessing the extent to which music might have played a part in the exercise of mantic ministry. A major problem is that although the reports sometimes refer to mantics by terms which have musical associations, they make no specific mention of music itself. Another problem is that there is no way of knowing whether the terms in question are used strictly or loosely. Nevertheless, the use of music-related terminology by the writers of the reports suggests in itself that music was a normal concomitant of at least certain aspects of mantic activity.

The music-related terms are few but recurrent. The most helpful is *assinnum/assinnu* '(cultic) singer' used in four of the letters to designate two people who conveyed divine messages (the term may be related to the Hebrew *shiyr/shirah* 'a/the song'). Frequently used, but less direct, are the designations *apilum/apiltum* (masculine and feminine, respectively) and *muḫḫûm/muḫḫūtum* (masculine and feminine, respectively). The first means 'answerer', the second means 'ecstatic' (substantive); both may have musical connotations given the circumstances and nature of the delivery of prophetic messages elsewhere, especially Israel and Judah. The term *nabû* ('one who is called'), which has

mantic associations in one letter, is also of interest in view of its direct relationship with the biblical Hebrew word for a prophet, *nabiʾ* (n. 2).[7] Not only was music closely associated with the operation of prophecy among the biblical ancient Israelites, but in several post-exilic biblical texts the musical service of the Levite musicians of the Second Temple is referred to as 'prophesying'. In view of the etymological relationship between the Mesopotamian and Hebrew words, it would seem reasonable to suppose that musical practices similar to those shown in the Bible as belonging to the delivery of prophecy in ancient Israelite culture were also prevalent in Mesopotamia in antiquity. Nevertheless, whether this was the case, and in what way or ways the practices might have been similar, is uncertain (Stökl 2012: 57, 65, 211–215).[8]

Two passages from Mesopotamian documents outside the Mari letters also point to the association of music – song in these cases – with inspired utterance. One is from a collection of proverbs. It states: 'The songs of a city are its omen diviners' ('Proverbs: Collection 7', ETCSL 6.1.07, line 90).[9] The other is from a dream interpretation known as 'Dumuzid's Dream':

> Bring my singer expert in songs, bring my singer! Bring my perspicacious girl, bring my sister! Bring my wise woman who knows the meanings of dreams, bring my sister! I will relate the dream to her.[10]
>
> ('Dumuzid's Dream', ETCSL 1.4.3, lines 22–24)

The outward similarity between the above narrative and that in HB 2 Kings 3.15 (quoted in §3.1.1) is striking, the more so when account is taken of the fact that the word 'singer', occurring twice in the first sentence here, translates the Sumerian word **nar** which more usually means 'musician'. Nevertheless there are noteworthy differences. Whereas in the HB 2 Kings 3 narrative it is the prophet who calls for a musician who will create the right ambience for delivery of the oracle, in 'Dumuzid's Dream' it is Dumuzid who calls for the singer (who will interpret the dream and deliver the oracle) and the musician, who are perhaps one and the same person. There is also a difference of gender in that the prophet Elisha and his musician are male whereas Dumuzid's 'perspicacious girl' (his 'wise woman' who interprets dreams) and his 'singer'/'musician' are female.

Texts from Assyria typically refer to prophets by the term *raggimu/ragginto* 'proclaimer' (Huffmon 2000: 57; Schneider 2011: 88). This may be seen in the same light as the terms 'answerer' and 'ecstatic' in the Mari letters.

The ancient Mesopotamians had a highly developed system of astrology (which they used in divination) and doctrine of cosmology. Both belonged with the Mesopotamians' vivid mythology of deities and the supernatural world, and their perception of the influence that the deities and the planets exerted on their lives. It was in relation to astrology and cosmology that the Mesopotamian genius for mathematics reached its full potential.

3.1.4 Egypt

There is little direct information about the association of music with mantic activity in ancient Egypt. Ancient Egyptian prophets (singular: *ḥm-nṯr*) had non-musical liturgical functions in the temple rituals, alongside but different from those of priests (singular: *wʿb*) (Gee 2004). As regards prophetic pronouncements, these were the result of divination, as in Mesopotamia, and most usually commissioned by the monarch or members of the royal court or people of high standing in society outside the royal households. While it may be supposed that formal presentation of prophetic pronouncements (the utterance of oracles) occurred, and that such pronouncements were delivered in heightened speech or semi-melodic recitative, perhaps even to the sound of stringed instruments, there is no direct evidence to prove that this was so.[11]

3.2 Warfare and music

3.2.1 Israel, Judah and the Levant

Biblical texts concerned with the pre-exilic and exilic periods provide a fairly comprehensive picture of the association of music with warfare in ancient Israel and Judah. It is justifiable to assume that where there was a regular army, shofar calls were used to summon the troops. In situations where there was no regular army, shofar calls announced the formation of a fighting force and implicitly invited eligible men to present themselves (HB Judges 3.27; 6.34). When warriors marched into battle they might be accompanied by priests with sacred paraphernalia and 'the trumpets [*ḥatsotserôt*] for sounding the alarm [*terûʿah*]' (HB Numbers 31.6). Song in praise of the deity might also belong to this stage of warfare: a passage in HB 2 Chronicles (a late source) says that Jehoshaphat 'appointed ⌞those who were to sing⌟ [*meshorariym* "singers"] to the LORD and praise him in holy splendour, as they went before the army', and provides what may have been the words that were sung: 'Give thanks to the LORD, for his steadfast love endures for ever' (HB 2 Chronicles 20.21).[12]

During battle itself, trumpet blasts invoking the deity's aid, battle hymns, and rallying shouts gave encouragement to the warriors (HB Numbers 10.9, 35; HB 2 Chronicles 13.14–15; 20.22). Shofar calls could be used to command troops on the battlefield (2 Samuel 18.16). Later sources name many different trumpet and shofar calls for directing troops in battle (Smith 2011: 130, 160–161). This method of communication is so germane to the conduct of open field warfare that it is likely to have been in use from very ancient times.

Victory in battle was celebrated with song, dance, the playing of hand drums, and the shaking of sistrums. Victory songs might be sung by women as well as men. The Song of the Sea (HB Exodus 15.1–18), probably the most celebrated victory song in the Bible, was, according to its preamble, sung by Moses and the Israelites. Nevertheless, the narrative in verses 20–21 of the same chapter places a victory song (which makes use of text almost identical to that of the

first verse of the Song of the Sea) on the lips of Miriam. According to the narrative, Miriam exhorted other women to sing with her as she led them in dance and the playing of hand drums. Women were also active in greeting homecoming victors with song, dance, and the sound of instruments. The victorious Jephthah was welcomed home by his daughter with dances and hand drums, the plural nouns probably implying the participation of several women (HB Judges 11.34a). When the Israelites returned home victorious from their battle against the Philistines near the Judaean border town of Socoh, women came out

> ⌞with [the] singing⌟ [*lashiyr*] ⌞and [the] dances⌟ [*wehammeḥolôt*], to meet King Saul, with ⌞hand drums⌟ [*tuppiym*], with joy [*simḥah*], and with sistrums [*shalishiym*]. And the women ⌞sang to each other⌟ [*wattaʿaneynah* 'answered, chanted, sang, responded, among themselves'] as they made merry, saying ….
>
> (HB 1 Samuel 18.6–7; my translation, adapted from the NRSV)

The pursuit of war inevitably produced casualties. The heroic dead were customarily mourned, buried, and remembered. All of those events were occasions for the utterance of wailing and lamentation. Wailing (*nehiy*) was a somewhat popular and spontaneous outpouring of distress and grief, whereas lamentation – the utterance of laments – was a studied and formal expression of sorrow, as described above. Laments over individuals who died in battle or as a direct consequence of armed conflict are referred to and sometimes quoted at several places in biblical literature concerned with the pre-exilic period. Among them are the laments purportedly uttered by David over Saul and Saul's son Jonathan (HB 2 Samuel 1.19–27) and over his cousin and former military captain Abner (HB 2 Samuel 3.22–34), and the lament said by the Chronicler to have been uttered by Jeremiah over King Josiah of Judah after the latter's death in battle on the plain of Megiddo (HB 2 Chronicles 35.20–27). The texts of the Davidic laments are supplied in the respective biblical narratives; the text of Jeremiah's lament over Josiah is referred to but not quoted. Information given in the biblical text in connection with David's lament over Saul and Jonathan and Jeremiah's lament over Josiah suggests that the compositions came to belong to official repertories of song and may have been used as national cultic laments (HB 2 Samuel 1.18; HB 2 Chronicles 35.25). A feature of the lament over Saul and Jonathan, which adds significantly to its poignancy, is the appearance of the phrase 'How the mighty have fallen!' three times during the course of the composition, in the manner of a refrain.

Information about Jeremiah's lament, supplied at HB 2 Chronicles 35.25, includes the observation that it was '⌞the male singers⌟ [*hashariym*]' and '⌞the female singers⌟ [*hasharôt*]' who sang of Josiah in their laments, the whole verse together implying that the singers sang Jeremiah's words. The attribution of the lament to Jeremiah may be honorific to ratify its text for use as a cultic lament in the Chronicler's own day, some 200 years after the exile. The

Chronicler's reference to performance by male and female singers may also reflect post-exilic practice. Even so, the practice is likely to have had a long ancestry, especially where performance by female singers is concerned. As regards performance by male singers, the possibility that in pre-exilic times prophets uttered laments as cultic song has been mentioned above. As regards performance by female singers, the text at HB Jeremiah 9.17(16)–20(19) refers to a special category of women, 'mourning women' (sometimes referred to as 'keening women' or 'wailing women'), who specialised in funeral and memorial lamentation, and were evidently a familiar phenomenon in the prophet's day. The passage begins:

> Thus says the LORD of hosts:
> Consider, and call for the ⌊mourning women⌋ [*qônenôt* 'keening women'] to come;
> send for the ⌊skilled women⌋ [*ḥakamôt* 'wise women'] to come;
> let them quickly raise a dirge [*nehiy* 'wail, wailing'] over us [the inhabitants of Zion]
>
> (HB Jeremiah 9.17[16]–18[17])

It concludes:

> Hear, O women, the word of the LORD,
> and let your ears receive the word of his mouth;
> teach to your daughters a dirge [*nehiy*],
> and each to her neighbour a lament [*qiynah*].
>
> (HB Jeremiah 9.20[19])

The women addressed at the beginning of verse 20(19) above may be taken to be the 'mourning women' and 'skilled women' referred to in verse 17(16).

Lamentation and wailing were also responses to the destruction of cities and peoples. Each of the five chapters of the biblical book of Lamentations is a carefully crafted lament over Jerusalem laid in ruins. Each of its first four chapters is constructed over an alphabetic acrostic; the fifth chapter has no acrostic although it has 22 verses, matching the number of letters in the Hebrew alphabet. By contrast, the passages from HB Jeremiah 9 just quoted above, with their references to lamentation and wailing, occur in the context of a prophetic vision of the imminent destruction of Jerusalem. And a prophetic vision of the annihilation of the 'house of Israel' is the basis of the lament in HB Amos 5.2–17. The preamble to those verses states, 'Hear this word that I [Amos] take up over you in lamentation [*qiynah*], O house of Israel' (5.1), and near the end of the lament the text has, 'They [the people of Israel] shall call the farmers to mourning, and those skilled in lamentation [*misped* "mourning"], to wailing (*nehiy*)' (5.16c).

Lamentation and wailing over foreign cities and peoples are presented or referred to at several places in the prophetic literature. As with the laments over

Jerusalem in HB Jeremiah 9 and over the house of Israel in HB Amos 5, they occur typically in the context of visions of future disaster. Three examples from the HB book of Ezekiel will serve as illustrations. The first is the lament over the king of Tyre (and thus, by association, the kingdom of Tyre) presented in Ezekiel 28.12c–19. A preamble to the lament (28.12a–b) includes the deity's command, 'Mortal [Hebrew: "Son of man"], raise a lamentation [*qiynah*] over the king of Tyre, and say to him …'.

The second is the lament over Egypt and its pharaoh presented in HB Ezekiel 32.2b–16. Its preamble (32.1–2a) includes a formula identical to that just noted in 28.12a–b except that here the object of the lament is 'Pharaoh king of Egypt'. The lament concludes with the notice, 'This is a lament [*qiynah*], and they shall lament it [*weqônenûah*]; the nations' daughters shall lament [*teqônennah* "they shall lament"] it; over Egypt and over all its hordes, they shall lament [*teqônennah*] it, says the Lord GOD' (32.16).

The third example is the short 'wail' over Egypt, at Ezekiel 32.19. It is occasioned by the prophet's vision of the Egyptians as having been 'handed over to the sword' (20b), that is, as having died by the sword, in battle. It is preceded by the divine instruction to Ezekiel: 'Mortal [Hebrew: "Son of man"], wail [*neheh* (from *nehiy*)] over the hordes of Egypt …' (32.18a).

In the Levant outside the specific confines of Israel and Judah, there is some suggestion that the lyre might have been played by women in the context of warfare – perhaps in conjunction with victory songs or laments after defeat. The suggestion arises from an ivory tablet from the period 1290–1165 BCE, found in Megiddo. The tablet is engraved with a sequence of images thought to illustrate 'an abbreviated version of the war and victory cycle' (Braun 2002: 96–7, with Illustration III.16). One of the images is of a woman standing and playing a lyre.

Before moving on to consider the association of music with warfare elsewhere in the ancient Near East, some attention may be given to music at the Battle of Jericho. The story of the Battle of Jericho (HB Joshua 5.13–6.27) is remarkable for its ritualistic content. The Israelites' reported total destruction of the city was preceded by what could be interpreted as the ritualised intimidation, or ritualised siege, of its inhabitants. According to the biblical narrative, a procession consisting of, in order, Joshua, a group of Israelite warriors, seven priests blowing seven animal horns (*shôfar*[*ôt*] 'shofar[s]' and *qeren* 'horn'), the ark of the covenant, and a rearguard of warriors, marched round the city, outside its walls, on seven consecutive days. During the first six days, the procession marched round the city once on each day. On the seventh day the procession marched round the city seven times. At the end of the seventh circumambulation, at a signal from Joshua, all the people made a 'great shout', the priests blew the horns anew, and the walls of the city collapsed. The Israelite warriors rushed into the city, captured it, slaughtered all its inhabitants and their livestock, and burned it to the ground.[13]

It is debatable whether, or to what extent, the narrative describes a credible event (this is a debate which, although separate from the question of the narrative's

historicity, inevitably impinges on it). It does seem credible that in attacks on cities in the ancient Near East, intimidation rituals or siege rituals were sometimes used, and that they involved circumambulation of the enemy by warriors who were accompanied by their deity's priests, their tokens of the presence of their deity, and mantic music. But there is no record of such a ritual in the Levant apart from this story. However, the narrative of the culmination of the ritual in loud shouting and animal-horn blasts, which caused the walls of the city to fall down, seems to belong more to the realms of mythology than to historical possibility. Nevertheless, as far as music is concerned this story is important in that it illustrates the operation of the ancient belief in the magical and apotropaic properties of the sound of certain musical instruments (animal-horn instruments in this case), especially when the instruments were used in ritually controlled cultic contexts (§7.2).

3.2.2 Anatolia

Ancient Near Eastern sources provide relatively little detail about the use of music in connection with warfare in Anatolia. However, there is no reason to doubt that music would have had its place both during battle (horn or trumpet signals; battle shouts and songs) and afterwards (hymns of victory; laments after defeat). There is also general literary evidence that song and instrumental music accompanied troops as they went out to battle (Schuol 2004: 207; Brison 2014: 186). More specific information may be gleaned from a group of three images in stone reliefs from Carchemish (also spelled Karkemish) in southeastern Anatolia,[14] dating to the ninth or eighth century BCE. The images have a pre-battle theme. One of them, from the royal buttress, appears to illustrate preparations for battle. Four men formally dressed and with an air of authority (perhaps court officials) stand in a stylised group. One of the men is sounding an animal horn, perhaps to summon soldiers, and two others appear to be fastening a large circular military shield to the back of the fourth man as if commissioning him into military service. Of the two remaining images, one, from the so-called 'long wall', shows three soldiers walking in procession, as if to battle. They wear short thigh-length tunics, are armed with long spears, and carry large circular shields. The other, from the same location, shows what appears to be a family dancing (perhaps) to send off its youthful son to battle. The 'son' is pictured to the right; he is also facing right (that is, he is looking off the picture), is dressed in a military-style short tunic and is walking away from two adults (a male and a female) who stand left, play (respectively) a long-necked lute and a double pipe, and look towards him. His hands are held above his head as if in a dancing pose or in a gesture of farewell. Between the 'son' and the two adults stands a child in the background, facing the adults and playing what seem to be crotals.

3.2.3 Mesopotamia

Evidence for the association of music with warfare in Mesopotamia comes almost exclusively from mythological writings. Although such writings inevitably

include elements of fantasy, it is reasonable to assume that the musical details are reliable reflections of reality since they are typically brief and incidental, suggesting that they were expected to be familiar to the intended readership.

With regard to the imminence of battle, a passage from the 'Hymn to Ḫendursanga' says that Ḫendursanga, a herald, 'signals with his horn to the troops before the mêlée of battle and the warriors go forth to the high plain' (lines 65–66). In the document known as 'Lugalbanda in the Mountain Cave', it is narrated that when Enmerkar, son of Utu, prepared to attack the land of Aratta, the lord of the threatened place began to muster his troops, and 'the herald {unnamed} made the horn signal sound in all the lands' (lines 21–25). Similarly, in 'Gilgamesh and Ḫuwawa', Gilgamesh had the horn sounded for 'single men' (that is, bachelors without households or mothers) to join him as warriors (lines 48–51). Song and perhaps the playing of stringed instruments might precede battle: a passage from the myth 'Inana and Gudam' relates that:

> Many followed Gudam on the streets of Unug. They sat armed before him. Her [Inana's (?)] singer Lugal-gabangal came out to {*lacuna*}, and looked at the troops. The singer met him [Gudam (?)] with a song, [*lacuna; perhaps* "touching the" (?)] string with his hand.[15] (lines 5–9)

The many Assyrian texts which have to do with music in connection with warfare mention a range of instruments including drums, cymbals, harps and lyres. This is supported by depictions on contemporaneous stone reliefs. The texts and iconography seem to imply that those instruments were used before and after battle. Nevertheless, some of the louder ones, and also horse bells, might well have been used on the battlefield (Mirelman 2011).[16]

Texts from elsewhere in Mesopotamia also say little about the use of music by the combatants during battle. The battle narratives are always written from the standpoint of the winning side, namely the local city or city state and its supporting patronal deities. Some of those narratives mention battle shouts, which are referred to in various ways. For example, the mythological narrative 'Ninurta's exploits: a **shir-sud** (?) to Ninurta' has, 'You [the god Ninurta] fiercely uttered battle-yells' (line 558), and, 'You [the mythical Ḫashtum stone] yelled fiercely with wild battle-yells' (line 604). The cult hymn 'The exaltation of Inana' (Inana B) has, 'At your battle-cry, my lady [the goddess Inana], the foreign lands bow low' (lines 20–21), and 'An elegy on the death of Nawirtum' refers to 'a war-cry in battle' (line 12). However, while battle yells and battle cries undoubtedly had a place in actual warfare, the musical value of such utterances would have been minimal. Evidence for the presence of musically more substantial elements during battle is provided in brief glimpses of the reactions of foreign enemies as they faced violent assault and destruction at the hands of superior forces. For example, a further passage from 'The exaltation of Inana' (Inana B) remarks: 'Because of you [Inana], the threshold of tears is opened, and people walk along the path of the house of great lamentations. In the van of battle, all is struck down before you' (lines 23–25), and yet another

passage from the same hymn says, 'With the lamenting **balang** drum a lament is struck up' (line 33).[17]

Victory might be celebrated with song and dance. In the myth 'Ninurta's exploits: a **shir-sud** (?) to Ninurta' (herein n. 17), it is said that at the end of a day of fighting and slaying the Asag, a hideous monster, the eponymous hero 'made a victory-chant over the dead body' (lines 302–303). In the mythological narrative 'Enmerkar and the lord of Aratta', there is a reference to Inana 'who, as the heroine of the battleground, makes the troops dance the dance of Inana' (lines 288–289).[18]

The casualties of war included the destruction of cities and the death of heroes and heroines. Their demise was mourned in appropriate style, which included musical elements, most usually the utterance of laments. It is characteristic of the laments for cities that, in contrast to the battle narratives excerpted above, they are written from the standpoint of representatives of the affected communities. Likewise, the references to honouring the heroic dead adduced below are written from the standpoint of representatives of the communities of the deceased.

Laments for cities have been mentioned earlier (§2.2.3 at and including n. 18). As stated there, the best known is the lament for Urim (Akkadian: Uru/Ur). The corpus of Sumerian cuneiform literature also includes laments for Sumer and Urim, Nibru (Akkadian: Nippur/Nibbur), Unug (Akkadian: Uruk), and Eridug (or Eridu; Akkadian: Irîtu). There are scattered references to song and instrumental music in most of the laments – especially those for Urim (Ur) and Nibru – but few seem to be relevant to the performance of the laments themselves.[19] A possible exception is a short passage from the lament for Ur, which narrates a mythological scene in which the city's own protector-goddess Nanna plays a sacred drum as she laments her city:

> The woman [Nanna] tears at her hair as if it were rushes. She beats the holy **ub** drum at her chest, she cries 'Alas, my city'.
>
> ('The Lament for Urim', lines 299–302; ETCSL 2.2.2)

The **ub** drum referred to in the quotation was probably a hand drum since other types of drum would have been too large to be held at the player's chest.

A limestone wall panel relief from the middle of the fifth century BCE, found in Nineveh, illustrating a scene connected with the Battle of Til-Tuba at the Ulai River in about 653 BCE (the decisive battle in the Assyrian campaign to conquer Elam), shows a procession of Elamites preceded by a warrior and continuing with seven harpists, two players on wind instruments, and two players on what may be lyres held horizontally. The procession possibly represents the Elamites' retreat after defeat by the Assyrians since following immediately behind the last instrumentalist, at the end of the procession, are figures of smaller stature, without either weapons or musical instruments, one of whom has forearms raised before the face, and another has hands poised above the head in the typical ancient Near Eastern gesture of grieving (Figure

3.1; Dumbrill 2005: 219–220 with hand-drawn partial illustration). Mirelman (2011: 2) offers a slightly different interpretation of the procession.

With regard to the death of heroes and heroines, the poem 'An elegy on the death of Nawirtum', for example, relates how Nawirtum, a heroine and victim of the battle for the city of Nibru, was mourned and lamented by the people of her city:

> They are overcome by pity for her whose life is ended. They are anguished (?) at her being laid out like a golden statue. Whoever looks upon her, will they not weep? … The best songs … of the bards of sweet words are altered everywhere into laments and moans.
>
> (ETCSL 5.5.3, lines 14–19)

In a narrative section of the myth 'Ninĝišzida's journey to the nether world' it is related that the eponymous royal hero's younger sister 'was crying in lament to him in the cabin at the boat's bow' (ETCSL 1.7.3, line 10). Similar statements recur frequently later in the same section, compounding the sorrow of the occasion of the mythical journey by royal barge across the waters to the 'nether world'. Strong emotion is also generated by a repeated narrative formula and a refrain in the text of a lament which appears later in the same work:

[line 76] My king will no longer shed tears in his eyes.
[line 77] The drum will … his joy in tears.

Figure 3.1 Nineveh, palace of Ashurbanipal, *c.*653 BCE. Retreating Elamites (seven of them with harps) after battle. Limestone wall panel relief.

British Museum, BM 124,802, c. Copyright © 2017 Trustees of the British Museum. Used by permission.

[line 78] Come! May the fowler utter a lament for you in his well-stocked house, lord, may he utter a lament for you. How he has been humiliated!
[line 79] May the young fisherman utter a lament for you in his well-stocked house, lord, may he utter a lament for you. How he has been humiliated!
[line 80] May the mother of the dead **gudug** priest utter a lament for you in her empty **ĝipar** [cloister], utter a lament for you, lord, may she utter a lament for you. How he has been humiliated!
[line 81] May the mother high priestess utter a lament for you who have left the **ĝipar**, lord, may she utter a lament for you. How he has been humiliated!'

('Ninĝišzida's journey to the nether world', ETCSL 1.7.3, lines 76–81)[20]

The repeated narrative formula 'may the [*designation of a person*] utter a lament for you … may he [*or* "she"] utter a lament for you' is a structural element that carries the lament forward by designating different personnel and their circumstances at each occurrence. The refrain 'How he has been humiliated!' at the ends of lines 78, 79, 80 and 81 is noteworthy for its similarity of form and expression to the refrain 'How the mighty have fallen!' in David's lament over Saul and Jonathan at HB 2 Samuel 1.19–27.

Near the beginning of the quotation 'the drum' is associated with the expression of sorrow, as in 'The exaltation of Inana' (Inana B), line 33, quoted earlier.

3.2.4 Egypt

There is ample evidence for the use of music in connection with military activity in ancient Egypt. A good deal of that evidence is pictorial in the form of carved reliefs and wall paintings in temples and tombs, but some is literary, both written on papyrus and carved on monuments, stelae, and temple walls and columns. A small number of archaeological finds of musical instruments and parts of instruments supports the pictorial and literary evidence.

A particularly rich source of information about military music is the mortuary temple of Ramesses III (reigned *c.*1187–*c.*1156 BCE)[21] at Medinet Habu on the west bank of the Nile (see Figure 1.2). Over 7,000 m^2 of the exterior and interior stone surfaces of that large edifice and its associated small temples are carved with reliefs and hieroglyphs that record the great pharaoh's military exploits and victories. Documents written on papyrus and leather, some of which have a bearing on the present subject, have been excavated from the temple precincts.

Iconographic sources, such as those at Medinet Habu and reliefs and wall paintings in temples and tombs elsewhere, show that the most usual military instruments were trumpets and drums (Manniche 1991: 74–83). Trumpeters were important members of the military organisation. Their mastery of a repertory of calls for signalling was necessary for directing troops, and could be decisive in battle.

While there is clearly a large quantity of information available from antiquity about music in connection with ancient Egyptian military life generally, there is surprisingly little about music in connection with warfare itself. It is natural to assume, from the information assembled above, that trumpet signals were important on the battlefield, and that this was one reason why skill in playing the instrument was cultivated by the military, but proof is lacking. There are pictorial representations which suggest that trumpets and drums might have been played together (see Figure 4.1), but the intended context of the content of the pictures is not easy to discern. In any case, although skill in the playing of military drums was cultivated, it is by no means clear whether or how that skill might have been put to use in conjunction with warfare, except perhaps in somewhat obvious activities of a ceremonial nature such as accompanying warriors when they marched out to and returned from battle. A further observation is that the above information about military music is concerned solely with trumpets and drums and says nothing at all about song or other melodic or semi-melodic vocal utterances.

It is nevertheless possible to glean something about music in connection with ancient Egyptian warfare from the contemporaneous literary and pictorial remains. On page 78 of her book *Music and Musicians in Ancient Egypt*, Lise Manniche provides, as her Figure 44, a line-drawn copy of a remarkable three-register relief from the mortuary temple of Ramesses III at Medinet Habu (built in the period 1186–1069 BCE). The registers represent three respective floors of a military fortress, one above the other, presented as two-dimensional reliefs in 'cutaway' style affording a view of the interior of the fortress. Each register, and thus each floor of the fortress, has its own scene; each scene represents an aspect of military life. When the scenes are viewed in succession, from top register to bottom register, they can be interpreted as representing a connected scenario. The three scenes in the three registers may be briefly described as follows:

1. Top register (uppermost floor of the fortress):
    a. soldiers (presumably so since the location is a fort) enjoy leisure time in the company of women;
    b. two people (males?) hold goblets (of wine? beer?);
    c. two people have their hands raised as if clapping and dancing.

2. Middle register (middle floor of the fortress):
    a. at the right-hand edge of the scene a trumpeter stands in profile, facing away from the scene (that is, facing right), with a short trumpet to his lips as if blowing it;
    b. to the left of the scene (that is, apparently behind the trumpeter's back), hand-to-hand fighting is in progress.

3. Bottom register (lowest floor – ground floor – of the fortress):

    a. soldiers descend a ladder from the floor above;
    b. each soldier has a large backpack and carries an axe;
    c. the soldiers make their way out of the fort through an open doorway;
    d. through the open doorway a soldier is visible outside the fortress, brandishing his axe.

Thus, in the scenario that unfolds in those three scenes, a military trumpeter blows on a short trumpet to summon troops from their leisure to prepare for and engage in battle.

A work known generally as 'The Story of Sinuhe' (or, more recently, 'The Tale of Sanehat'), extant from at least the Middle Kingdom, provides a rare reference to a war cry uttered during battle. The story is told autobiographically. Sinuhe/Sanehat presents himself as a high official and a close associate of the pharaoh.[22] At one point in his story, Sinuhe/Sanehat tells of a decisive duel between himself and the hero of a foreign enemy, possibly a Syrian tribe. He says that at dawn on the day of the duel, the Syrians, knowing that the duel was to take place, assembled at a distance on either side of the combatants. Sinuhe's own people were also present, and when he placed himself beside the enemy's hero, they willed him on. He continues:

> And then his {the enemy's hero's} shield, his dagger, his armour, his holder of spears fell,
> As I approached his weapons
> I made my face dodge
> And his weapons were wasted as nothing
> Each piled on the next
> Then he made his charge against me
> He imagined he would strike my arm
> As he moved over me, I shot him,
> My arrow lodged in his neck,
> He cried out, and fell on his nose,
> I felled him with his dagger
> I uttered my war cry on his back,
> Every Asiatic lowing
> I gave praise to Mont
> As his [the enemy's hero's] servants mourned for him
> ('The Tale of Sanehat', lines 134–142)[23]

'Mont', named at the end of the penultimate line of the quotation above, was a god of battle associated with Thebes and represented by a bull and a falcon.[24] That Sanehat/Sinuhe represents himself as praising a deity for his victory exemplifies the existence of the belief among the ancients that battle was a religious undertaking as well as a pragmatic one.

An example of what may have been a victory song is provided by a very early document known as 'The Autobiography of Weni' carved in hieroglyphics on a limestone stela from Abydos in the Sixth Dynasty (*c.*2325–*c.*2175 BCE).[25] Weni, an official under the pharaohs Teti, Pepi I, and Mernere/Merenre/Merenra, became Governor of Upper Egypt in the latter part of his life. Prior to his governorship, he was placed in command of an army that fought successfully against 'Asiatic Sand-dwellers'. The brief narration of the battle is followed by this victory song:

> This army returned in safety,
> It had ravaged the Sand-dwellers' land.
> This army returned in safety,
> It had flattened the sand-dwellers' land.
> This army returned in safety,
> It had sacked its {the enemy's} strongholds.
> This army returned in safety,
> It had cut down its figs, its vines.
> This army returned in safety,
> It had thrown fire in all its [mansions].
> This army returned in safety,
> It had slain its troops by many ten-thousands.
> This army returned in safety,
> [It had carried] off many [troops] as captives.
> (Lichtheim 1973: 20)[26]

Given the formal circumstances and setting of the text, the likelihood is that the song was a literary composition rather than the reproduction of an actual victory song. It may nevertheless exemplify something of the style and character typical of Egyptian victory songs of the Old Period. It is noteworthy that the text of the song is constructed to a simple repetitive formula which would have lent itself well to performance in heightened speech, chant, or even melodic song, although there is no explicit indication that the 'song' was actually sung.

Lastly in the present context, consideration may be given to a literary work preserved in a manuscript dating from perhaps the late thirteenth century BCE and known variously as the 'Admonitions of an Egyptian Sage', the 'Admonitions of Ipuwer' and the 'Dialogue of Ipuwer and the Lord of All'. It is written on the recto only of 17 leaves of papyrus, with 14 or 13 lines per page. The work affords rare and somewhat veiled glimpses of lamentation over casualties of war.[27]

In the 'Admonitions', Ipuwer describes the land of Egypt in the process of being destroyed. He sees the destruction as the result not of violent attack by an enemy from outside, but of decades of decadence and widespread corruption within. In Ipuwer's eyes the land is morally and socially derelict to the extent that the normal, stable social order has been overturned; lawlessness is rife and goes unpunished, business and commerce are out of control, temples and other sacred buildings are ransacked and profaned, and 'The man of character walks

in mourning on account of the state of the land' (manuscript recto 1; Lichtheim 1973: 150). Ipuwer both admonishes the country's leaders for allowing such a state of affairs to arise and laments the country's fate. He describes the situation in hyperbolic terms, often in the form of short, bald binary antitheses with corollaries, for example:

> See, he who had nothing is a man of wealth,
> The nobleman sings his praise.
> See, the poor of the land have become rich,
> The man of property is a pauper.
> See, cooks have become masters of butlers,
> He who was a messenger sends someone else.
> See, he who had no loaf owns a barn,
> His storeroom is filled with another's goods.
> (recto 8; Lichtheim 1973: 157)

Ipuwer presents his 'Admonitions'/'Dialogue' as an allegory: he describes the situation in the land of Egypt in terms of a country suffering conquest, occupation, and destruction at the hands of an enemy. In this connection it is noteworthy that the greater part of Ipuwer's text as we have it is framed by two passages (one at the beginning, the other near the end) which make use of images of battle and war as it might have been experienced by the inhabitants of a conquered place. Indeed, the very first extant line reads, 'The door[-keepers] say: "Let us go plunder"'. Within the remaining lines of the first recto of the papyrus, three antitheses announce: 'The bird[-catchers] are lined up for battle', 'The Delta[-dwellers] carry shields', and 'A man regards his son as his enemy'; these are followed by an invitation to 'Come and conquer'. Additional images of a land embattled follow on recto 2: 'The land is full of gangs, A man goes to plow with his shield' (Lichtheim 1973: 150) and 'Towns are ravaged, Upper Egypt became a wasteland' (Lichtheim 1973: 151); and the beginning of recto 3 has: 'Lo, the desert claims the land, The nomes are destroyed, Foreign bowmen have come into Egypt' (Lichtheim 1973: 152).

The second of the two 'framing' passages occurs on recto 14 and 15 and is less diffuse:

> [r. 14] Every man fights for his sisters and protects himself. Is it Nubians? Then we will protect ourselves. There are plenty of fighters to repel the bowmen. Is it Libyans? Then we will turn them back. The Medjai are content with Egypt.
> [r. 14] How then does every man kill his brother? The troops [r. 15] we raised for ourselves have become Bowmen bent on destroying! What has come from it is to let the Asiatics know the state of the land. Yet every foreigner fears it. The experience of the people is that they say: 'Egypt will not be given over <to> sand!'
> (Lichtheim 1973: 161)

This second framing passage is particularly interesting for three reasons. One is that it extends the imagery of battle and war by referring to four ethnic groups that were traditionally enemies of Egypt: the Nubians, the Libyans, the Medjai, and the Asiatics. Another is that it implies that those groups were no threat to Egyptian society. The third is that it contains the key to the allegory, the moral of the story, as it were, although still expressed in terms of warfare: 'The troops we raised for ourselves have become bowmen bent on destroying!' In other words, destruction has come to Egypt not from foreign elements but from indigenous Egyptians within the land.[28]

Set against the allegorical background of wartime depredations, dislocation, and destruction are five references to music. Two of them are no more than examples of the antithetical style characteristic of much of the 'Admonitions'/'Dialogue': 'See, he who did not know a lyre owns a harp', and 'He who did not sing extols the goddess'.[29] However, three are more significant. They refer to lamenting, laments, and dirges, uttered in sorrow for the state of affairs in the country, the first of them also exhibiting the antithetical style (perhaps not without a tinge of bitterness):

> Lo, nobles lament, the poor rejoice.
>
> (recto 2; Lichtheim 1973: 151)

> Lo, merriment has ceased, is made no more, Groaning is throughout the land, mingled with laments.
>
> (recto 3; Lichtheim 1973: 152)

> Singers are at the looms in the weaving-rooms, What they sing to the goddess are dirges.
>
> (recto 4; Lichtheim 1973: 153)

Thus Ipuwer the Egyptian presents cameos of human 'war' casualties bemoaning their fate and the fate of their – and Ipuwer's – land.

Notes

1 On divination, omens, and prophecy in the ancient Near East, see, for example, Nissinen 2000; Stökl 2012; Nissinen 2017; Maul et al. 2018.

2 'Prophet': Hebrew *nabiy'/nebiy'*; less frequently *ḥozeh* 'seer'. On prophecy and prophets in ancient Israel, see Day 2010: esp. 151–409; Smith 2011: 56 and literature cited in n. 67 there; Stökl 2012: 153–156; Boda and Beal 2013; Nissinen 2017: 144–68.

3 A female prophet: Hebrew *nebiy'ah* 'prophetess'. For the female prophets listed in the text, see HB Exodus 15.20 (Miriam), Judges 4.4 (Deborah), 2 Kings 22.14 (Huldah), and Nehemiah 6.14 (Noadiah). The term 'the prophetess', used in HB Isaiah 8.3 to refer to an anonymous woman, once regarded as possibly referring to a prophet's wife (see, for example, the notes on that verse in the NJPST, HCSB, and NIV Study Bible), is now reckoned to refer to a female prophet: Williamson 2010: 65 and n. 4 there.

4 For example, HB Deuteronomy 18.10–12; Leviticus 19.26. Note, however, that Urim and Thummim (two oracular stones) were permitted for discerning the divine will provided that they were used to answer questions addressed directly to the deity and formulated so as to elicit only a negative or a positive response (e.g. HB 1 Samuel 23.9–12; 30.7–8; HB Numbers 27.21). The interpretation of dreams was also

permitted so long as the gift of interpretation was from the deity (e.g. HB Genesis 41; HB Daniel 2; 4). See Benko and Powell (2011).

5 HB Jeremiah 9:20d[19d]; HB Ezekiel 19:1, 14e; 27.2; 28.12; 32.2, 16a; HB Amos 5.1.

6 On mantic traditions in Mesopotamia, see Huffmon 2000; Nissinen 2003; Schneider 2011: 85–88; Nissinen 2017. On female mantics in the Mari and neo-Assyrian texts, see Stökl 2010.

7 For the terminology, see Huffmon 2000: 49, 56; Nissinen 2003: 14; Stökl 2010: 47–51 with n. 9; Schneider 2011: 86–77; Stökl 2012: 27–69.

8 I am indebted to Nele Ziegler for this reference.

9 The word 'songs' translates the Sumerian **en$_3$-du-bi** (from **en$_3$-du** 'song').

10 The word 'songs' translates the Sumerian **en$_3$-du** ('song').

11 On the lack of evidence for the practice of predictive prophecy by intermediaries (i.e. the formal utterance of prophetic oracles by 'prophets') in ancient Egypt, and on the misconception that the so-called 'Prophecy of Neferty' (*or* 'Sayings of Neferti') is a prophetic text, see Weeks 2010: 31. Generally on the 'Prophecy/Sayings of Neferty', see Lichtheim 1973: 139–140; Weeks 2010: 31–34. An apparent allusion to the association of the sound of a stringed instrument with the utterance of prophecy occurs in the 'Prophecy of Neferty', in the translation of line 7 of the first section of the full text given in transliteration and translation in DEU (at digitalegypt.ucl.ac.uk/literature/nefertytransl.html), which has: 'I [king Sneferu] have had you summoned, to have you seek out for me […] a friend of yours who can strike the right chord, who will tell me some fine words […]'. However, the phrase 'can strike the right chord' is a poetic translation (a metaphor for knowing how to conduct oneself appropriately), not a literal one, and cannot therefore automatically be taken to reflect a musical allusion in the original language. Lichtheim (1973: 140) translates the passage: 'Comrades, I have had you summoned in order that you seek out for me […] a friend of yours who has done a noble deed, so that he may speak to me some fine words […].'

12 The phrase 'Give thanks to the LORD, for his steadfast love endures for ever' occurs several times (sometimes with the addition of 'for he is good' after the incipit) in the HB, notably in Psalms. It may have had an independent existence as an acclamation or a cultic shout; details in Smith 2011: 71 and n. 32 and n. 33 there (note that the last word of the transliterated Hebrew quotation in the middle of p. 71 there should read '*ḥasĕdô*').

13 Further on the destruction of Jericho, and for the possibility that the animal-horn trumpets envisaged in the narrative of the Battle of Jericho were made from wild goats' horns rather than the more usual and traditional rams' horns, see Smith 2011: 159.

14 The site of ancient Carchemish lies on the present border between Syria and Turkey. Its neighbouring Syrian and Turkish cities are Jarabulus (also rendered Djerablus, and other variants) and Karkamiş, respectively.

15 Translations and texts: 'A Hymn to Ḫendursaĝa' (Ḫendursaĝa A), ETCSL 4.06.1; 'Lugalbanda in the Mountain Cave', ETCSL 1.8.2.1; 'Gilgamesh and Ḫuwawa' (Version A), ETCSL 1.8.1.5; 'Inana and Gudam', ETCSL 1.3.4.

16 I am indebted to Dr Sam Mirelaman for this reference.

17 Translations and texts: 'Ninurta's exploits: a **shir-sud** (?) to Ninurta', ETCSL 1.6.2; 'The exaltation of Inana' (Inana B), ETCSL 4.07.2; 'An elegy on the death of Nawirtum', ETCSL 5.5.3.

18 Translation and text: 'Enmerkar and the lord of Aratta', ETCSL 1.8.2.3.

19 For the texts of those laments, see the website at the URL given at the end of n. 18 in Chapter 2.

20 In the version quoted here, the line separation is mine. For ease of reading I have removed alternative readings, which are noted in the ETCSL text; this does not affect the points I make here about the lament.

21 Ramesses' regnal dates are as given in Wilkinson 2010: xvii. Shaw 2003: 485 gives 1184–1153 BCE.
22 Annotated English translation in Lichtheim 1973: 222–235. English translation, a transliteration and linked commentary in 'The Tale of Sanehat', DEU at www.digitalegypt.ucl.ac.uk/literature/sanehat/text.html. The primary and earliest extant sources of 'The Story/Tale of Senuhe/Sanehat' are two papyri from the Middle Kingdom: Papyrus Berlin 3022 (Twelfth Dynasty) and Papyrus Berlin 10499 (late Middle Kingdom). The latter was found in a tomb under the precinct of the mortuary temple of Ramesses III at Medinet Habu. Both are reckoned to be copies of earlier versions of the material (and each contains a text additional to Sinuhe/Sanehat). A third substantial source is a large but somewhat damaged ostracon from the Nineteenth Dynasty. There exist also small amounts of text on several papyrus fragments and small ostraca from antiquity. For details of the sources, see Lichtheim 1973: 222–223, and the notes provided with the text at the above URL for 'The Tale of Sanehat'.
23 Translation: 'The Tale of Sanehat', DEU at www.digitalegypt.ucl.ac.uk/literature/sanehat/text.html.
24 See Parkinson 1998: 47 n. 36 (where the god is referred to as 'Montu', also on p. 34 and elsewhere in Parkinson's translation of *Sinuhe*); and n. 29 to the translation in DEU, www.digitalegypt.ucl.ac.uk/literature/sanehat/comments.html#29.
25 Details and bibliography followed by an annotated English translation: Lichtheim 1973: 18–23. Weni is known as Uni in the writings of some scholars. For background to Weni's career, see Wilkinson 2010: 91–94.
26 The lineation and the bracketed interpolations are Lichtheim's; the interpolation in braces is mine.
27 The papyrus on which the 'Admonitions'/'Dialogue' is written is held at the Dutch National Museum of Antiquities, Leiden, the Netherlands, where it is catalogued as Papyrus Leiden L 344. Major editions: Gardiner 1909; Lichtheim 1973: 149–162; Enmarch 2005, 2008. Enmarch's analysis of historical readings of the Ipuwer papyrus by present-day and earlier scholars leads him to the conclusion that 'while the poem's outlook, as with all literature, may have been influenced by the memory of historical events … its descriptions provide no reliable criterion for dating its composition' (Enmarch 2008: 20). With regard to internal literary evidence for the time of composition, Enmarch writes, 'Although the linguistic and lexicographic evidence is tentative, it cumulatively points … towards a dating in the late Middle Kingdom (from about the reign of Senwosret III [also known as Senusret III, *c.*1836–*c.*1818 BCE] onwards) to the Second Intermediate Period [began *c.*1630 BCE]' (Enmarch 2008: 22).
28 According to Lichtheim's note 29, placed one sentence prior to the first of the above two inset paragraphs quoting from recto 14 and 15, 'The king is now speaking. What is left of his speech indicates that he places the blame for the disorders on the people themselves and maintains that Egypt has nothing to fear from foreigners' (Lichtheim 1973: 162, n. 29).
29 Both passages: recto 7; Lichtheim 1973: 156. The 'goddess' referred to in the second passage is Meret, goddess of song (Lichtheim's n. 19 [Lichtheim 1973: 162] to this passage).

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4 Musical media, 1

The human voice, chordophones and aerophones

4.1 The human voice

In addition to its ability to produce sound at specific pitches, the human voice is unique in two respects. One is its ability to produce a range of timbres and pitched and unpitched sounds far beyond that of any single non-human sound source known from antiquity; the other is its ability to convey words. In relation to the latter, there are two aspects of the use of the human voice which fall outside the broad definition of music proposed in the Preface to this work. One is when the voice utters involuntary sounds (as of, for example, surprise, pleasure, pain, joy and sorrow). The other is when the voice is used for ordinary speech (as in normal talking and conversation). Involuntary vocal sounds by their nature lack the element of choice essential to their being considered as music. Ordinary speech is, of course, sound produced by the human voice, but it is without the heightened vocal inflections, rhythmic verbal patterning and studied marking of punctuation in the verbal flow, which characterise the delivery of formal speeches, proclamations, public announcements, and the utterance of poetic, sacred and mythological material, and which define them as musical, or at least proto-musical items. More will be said on this subject in Chapter 7.

As a musical medium, the human voice is attested throughout the ancient Near East in connection with all five types of cultic activity discussed in Chapters 2 and 3. However, there seems to be no evidence of the music of human voices in connection with sacred dance in Mesopotamia and ancient Egypt. This may be an accident of the extant sources rather than a reflection of reality. In a small number of narrative sources, battle shouts and songs are imputed to deities.

The musical use of both male and female voices is well attested in the context of organised religion. However, musical utterance by women is less frequently attested in the sources than musical utterance by men. This probably reflects the norms of ancient Near Eastern society which profiled women much more modestly in executive tasks than men.

There is little that can be said about vocal sound quality beyond some obvious remarks. Male and female voices had inherently different sound qualities predicated predominantly on their different pitch ranges. If there had been castrato lamenters in Babylon in the third to late-second millennium BCE, as has been

suggested (§2.2.3), their ritual utterances would naturally have been different in tessitura and vocal quality from those of both women and non-castrati men.

4.2 Musical instruments: general introduction

All the basic types of ancient Near Eastern musical instruments are represented in connection with cultic activity throughout the ancient Near East. These are: chordophones (stringed instruments), aerophones (wind instruments), membranophones (percussion instruments with skins), and idiophones (clashing, clapping, and shaking instruments). Subtypes of the basic types are evident, some of which are regional variants. The discussions which follow here and in Chapter 5 treat the instruments in the order in which they are listed above, and take into account the instruments' frequency of attestation and breadth of distribution. The value of considering frequency of attestation is that it gives an idea of the extent of the knowledge base for each type of instrument, which in turn affects the degree of confidence that can be placed in what we know about individual instruments. The value of considering breadth of distribution is that it can form a basis for comparing the deployment of types of instrument both across the broad span of religious cultures in the Near East in antiquity and within individual religious cultures. An important caveat is that any such considerations are dependent on source material which has been preserved by chance, and may therefore give a distorted picture of the reality of its own times. Nevertheless, cautious and careful consideration of frequency of attestation and breadth of distribution in the light of present knowledge can provide valuable insights into instruments and their deployment in cultic contexts in the ancient Near East.

4.3 Chordophones: plucked-string instruments

There is no evidence for the existence of bowed string instruments in either sacred or profane contexts in the ancient Near East. Plucked-string instruments, on the other hand, are well attested in both contexts in ancient sources. They were of two types, differentiated by construction and method of playing. One type was represented by lyres and harps, the other by long-necked lutes.

4.3.1 Lyres and harps

Lyres were ubiquitous in the Near East in antiquity, and were represented in most of the five kinds of cultic activity discussed in Chapters 2 and 3 (Hickmann 1949: 153–158; Manniche 1975: 81–91; Lawergren 2001: 451, drawings k, l, m; Braun 2002: xxxii–xxxiv [items 1–16]; 16–17, 76 with Illustration III.2a–l, 78–79, 96–97 with Illustration III.16; Dumbrill 2005: 227–303; Kolyada 2009: 32–42; Mirelman 2011; Franklin 2013; Franklin 2016). They were the universally highly regarded plucked-string instruments, and are more frequently attested in connection with cultic activity than harps. They are

attested in connection with liturgies, rituals and processions in all regions of the ancient Near East. They are also evident in connection with mantic traditions in ancient Israel and possibly Anatolia (§3.1.2) and Mesopotamia (§3.1.3), and perhaps also in connection with warfare in the Levant (§3.2.1) and Mesopotamia (§3.2.3). They are not mentioned specifically in connection with sacred dance in any region, but may possibly be subsumed under the occasional mention of 'instruments'.

Harps were also ubiquitous in the ancient Near East (Hickmann 1949: 164–179; Manniche 1975: 36–69; Braun 2002: 58–62; Dumbrill 2005: 175–223; Kolyada 2009: 42–49). Their distribution in types of cultic activity mostly paralleled that of lyres as far as liturgies, rituals, processions, mantic traditions and warfare were concerned. However, there appears to be no explicit evidence that harps were associated with processions in Anatolia, or with warfare in the Levant.

While there are written and iconographic attestations to the cultic use of harps in the Levant (Braun 2002: 58–61 with Illustrations II.6a, b; II.7a; II.8a [Megiddo]; Dumbrill 2005: 221, Plate 63 [Megiddo]; Caubet 2014: 176–177 [Ugarit]), there are none in the Hebrew Bible (HB). The HB frequently pairs the names of what have been taken to be two kinds of plucked-string instrument, *kinnôr* and *nebel*. Since *kinnôr* is known to mean 'lyre', for centuries there has been a popular assumption that *nebel* means 'harp'. This assumption is reflected in many English translations of the Bible: 'harp and lyre' is a common translation of the Hebrew *nebel wekinnôr*.[1] However, there is no scholarly consensus about what type of plucked-string instrument the *nebel* was (BDB: 614, at '*nbl*', I.i, ii; Kolyada 2009: 42–53). Braun (2002: 22–24, 290, 291, Illustration V.57.c, d), following Bayer (1968), has produced a strong argument for regarding the *nebel* as a 'tenor or bass lyre'. Nevertheless, Burgh (2006: 20, 24–25) and Caubet (2014: 176–177) seem to take for granted that the *nebel* was a harp. Suggestions in addition to harp and lyre have included 'lute' and 'psaltery'. The lack of scholarly consensus is also reflected in English translations of the Bible (Table 4.1).

The biblical Hebrew word *minniym* is also relevant to this discussion. It is a plural word and occurs only twice: in HB Psalm 150.4, and in what is widely accepted as an apocopated plural form (*minniy*) in HB Psalm 45.9 (Heb.) (BDB: 577, '*mn*', I; Kolyada 2009: 161–162). The word means 'strings' as of a stringed instrument[2] (the singular form *men* 'hair, string', is not attested in the HB). Most English translations of the Bible treat the word as a generic term, translating it 'stringed instruments' or 'strings'. The NJPST is noteworthy for its translation 'lute(s)' in both psalms (Table 4.1). A consequence of the generic use of the term is an inevitable lack of specificity.

4.3.1.1 Structural features of lyres and harps

The basic structural features of lyres and harps were similar in several respects. They consisted principally of: (a) an open wooden frame; (b) strings stretched

Table 4.1 Translations of the biblical Hebrew terms *kinnôr*, *minniy*(*m*) and *nebel*, in HB Psalms 45, 57, 71, 81, 108 and 150, in eight English-language renderings of the Bible

Psalm 45.8[9]	***minniy*/*minniym***
KJV	Whereby
NKJV	by which
NRSV	stringed instruments
NJPST	Lutes
ESV	stringed instruments
LEB	stringed instruments
NIV	music of the strings
RNJB	Music

Psalm 57.8[9]	***nebel wekinnôr***
KJV	psaltery and harp
NKJV	lute and harp
NRSV	harp and lyre
NJPST	harp and lyre
ESV	harp and lyre
LEB	harp and lyre
NIV	harp and lyre
RNJB	lyre and harp

Psalm 71.22	***nebel … kinnôr***
KJV	psaltery … harp
NKJV	lute … harp
NRSV	harp … lyre
NJPST	lyre … harp
ESV	harp … lyre
LEB	a stringed instr … a lyre
NIV	harp … lyre
RNJB	lyre … harp

Psalm 81.2[3]	***kinnôr … nebel***
KJV	harp … psaltery
NKJV	harp … lute
NRSV	lyre … harp
NJPST	lyre … harp
ESV	lyre … harp
LEB	lyre … harp
NIV	harp and lyre
RNJB	harp … lute

Psalm 108.2[3]	***nebel wekinnôr***
KJV	psaltery and harp
NKJV	lute and harp
NRSV	harp and lyre
NJPST	harp and lyre
ESV	harp and lyre
LEB	harp and lyre
NIV	harp and lyre
RNJB	lyre and harp

Psalm 150.3	***nebel wekinnôr***
KJV	psaltery and harp
NKJV	lute and harp
NRSV	lute and harp
NJPST	harp and lyre
ESV	lute and harp
LEB	harp and lyre
NIV	harp and lyre
RNJB	lute and harp

Psalm 150.4	***minniym weʿûgab***
KJV	stringed instruments and organs
NKJV	stringed instruments and flutes
NRSV	strings and pipe
NJPST	lute and pipe
ESV	strings and pipe
LEB	strings and flute
NIV	strings and pipe
RNJB	strings and pipes

– – –

Publication dates of translations used:

KJV 1611; NKJV 1982; NRSV 1989; NJPST 1999; ESV & NIV Smith 2011; LEB 2012; RNJB 2018

– – –

Possible chronology for the selected psalms:

Pre-exilic: Psalms 45; 71; 81(?);[1] 108(?).

Exilic: Psalm 57(?). Post-exilic: Psalm 150

1 For the pre-exilic dating of HB Psalm 81, compare HB Amos 5.23.

between two sides of the frame; and (c) a sound box (resonator) incorporated into or functioning as one side of the frame. Strings were fastened along the resonator (sometimes – especially on lyres – low down on the resonator so that they passed over a bridge) and stretched, parallel to each other or slightly fanned, to another side of the frame where each was secured with an individual peg or other fitment for adjusting the tuning. The strings were in one plane. The side of the frame bearing the resonator was usually treated as the base of the instrument. Although the descriptions in this and subsequent paragraphs are necessarily basic and of a schematic nature, ancient iconographic and literary sources witness to a variety of sizes and designs of harp and lyre, and to varying degrees of embellishment and decoration of the basic shapes. Some of those features can be appreciated from the images referred to in the text and notes in the present chapter and Chapters 2 and 3 (especially Figure 2.1; Figure 4.1; Figure 4.2).

The frame of the harp was mainly two-sided. The sides formed two arms of similar length joined together at one end at a right angle or an obtuse angle, forming a wide 'V' shape. A variant of that shape closed the open end of the 'V' with a third side, forming a triangular frame. A further variant frequently depicted in iconographic sources had a wide arch shape, reminiscent of a hunter's bow, in which the strings were stretched between the arms of the arch like multiple bowstrings. Depending on the basic shape of the frame, the area through which the strings of a harp passed described approximately a triangle or a circle segment.

Figure 4.1 Zincirli, southeast Anatolia, eighth century BCE. Procession with hand drums and symmetrical and asymmetrical lyres.

Relief. Istanbul Museum. Photograph copyright © Bora Bilgin (2006) and Hittite Monuments (www.hittitemonuments.com/zincirli). Used by permission.

By contrast, the frame of the lyre was four-sided and might be symmetrical (rectangular, square, or trapezoid) or asymmetrical. On a symmetrical lyre the strings were stretched from the resonator to the parallel and sometimes longer opposite side of the frame (e.g. Figure 4.1, third instrument from left). The area through which the strings passed was thus rectangular or trapezoidal. On an asymmetrical lyre, the side of the frame opposite the resonator's soundboard was set at an angle so that it was not parallel to the soundboard but closer to it at one end than at the other (e.g. Figure 4.1, fourth instrument from left). The area through which the strings passed was thus asymmetrical.

4.3.1.2 Consequences of structure for tuning

The different basic shapes of harp and lyre had consequences for the instruments' tuning and range of optimal sonority (West 1994: 165–168). On the harp, the strings nearest the apex of the instrument's arms were the shortest and therefore naturally sounded at the highest pitches. Strings became gradually longer the further from the apex they were placed, and therefore naturally progressively lower in pitch. On the harp, therefore, the range of optimal sonority was progressively graded over the succession of consecutive strings, and was potentially considerable – perhaps as much as two octaves. It would no doubt have been possible for strings near to each other to be tuned to pitches outside the naturally expected order to a limited extent, but the overall pitch range would nevertheless have had to conform to the progression from high at one end of the row of strings to low at the other.

However, on the symmetrical lyre, all strings were of the same or similar length. The range of optimal sonority of the instrument was limited by how much any one of its strings could be slackened or tightened before it lost its

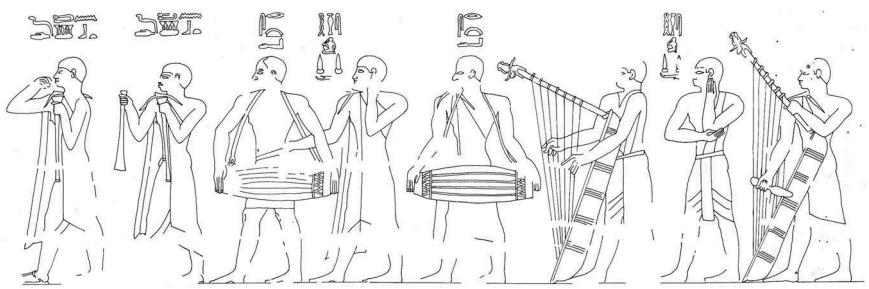

Figure 4.2 Kawa, Upper Egypt (now northern Sudan). Temple of Taharqa (built 684–680 BCE). Instrumentalists and singers(?). Stone relief from the north and south halves of the west wall of the hypostyle hall (compare Macadam 1955: Plates XIV and LIIIa, b).

Hand-drawn copy by Lise Manniche. Copyright © Lise Manniche. Used by kind permission.

sonority, buckled the frame or broke (compare Dumbrill 2005: 235–236). Given the size of an average portable lyre and the quality of the materials available to build and string such a lyre in Near Eastern antiquity, it may be conjectured that the optimal pitch range within which any one of its strings could be tuned, and therefore the optimal pitch range of the instrument as a whole, would have been somewhat less than an octave, perhaps around a sixth in modern tonal terms. On the other hand, while the construction of the symmetrical lyre limited the instrument's optimal pitch range compared with the harp, it allowed the strings to be tuned to patterns of pitches which were not dependent on a pitch progression from high to low, or the reverse, over consecutive strings. Drawing the finger across all the strings in turn would sound the pattern; drawing the finger at varied (uneven) tempi would give rhythm to the pattern; playing two or three consecutive strings would sound short melodic motifs available from the tuning pattern. The use of tuning patterns was a salient feature of the music of the lyre in antiquity (see Chapter 7).

The limitation in optimal pitch range consequent on the design of the symmetrical lyre could be mitigated to some extent by anchoring the strings close together at the resonator and fanning them to attach them to the opposite frame (e.g. Figure 4.1, third instrument from left). However, if the stringing of the reconstructed Queen's lyre from third-millennium Ur is a true reflection of ancient Babylonian practice, its symmetrical fanning would mean that the centre string was the shortest string and therefore potentially the highest sounding, while the strings on each side of it were progressively longer and therefore potentially progressively lower sounding.

On the asymmetrical lyre, the opposite side of the frame from the resonator was set at an angle to the parallel, which meant that there was a small progressive gradation of string length over the succession of strings attached to it, and therefore a naturally progressive gradation in pitch from one end of the row of strings to the other. The potential range of optimal sonority was inevitably greater on an asymmetrical lyre than on a symmetrical lyre of similar size.

4.3.1.3 Playing methods

Flat-bottomed resonators allowed harps and lyres to stand unsupported by the player. This permitted two-handed playing, one hand on each side of the instrument. When lyres were carried, two-handed playing was possible when the resonator was gripped between the player's upper arm and ribcage, with the strings pointing forward, leaving the hands free. When harps were carried they were usually supported by one hand and played with the other. Large harps that were not self-supporting could be played two-handed by resting one end of the frame on the ground and the other against the player's shoulder, leaving the hands free. Fingers or plectra could be used. Harps and lyres could also be played in a horizontal position, that is, held flat with the plane of the strings parallel to the ground, for which purpose supporting straps passed over the player's shoulder or round the player's waist would have been necessary. There

are several ancient depictions of horizontally held lyres and harps, especially in the context of processions of a military nature (e.g. Dumbrill 2005: 199–201, Plates 26–29; Figure 3.1). Where the method of playing can be discerned, it is usually by plectrum.

4.3.2 Lutes

The third type of plucked-string instrument evident in connection with cultic activity in the ancient Near East is the lute (Hickmann 1949: 159–163; Plate XCVII–C; Manniche 1975: 70–81; Manniche 1991; Lawergren 2001: 451, drawing n; Braun 2002: 80–85; Dumbrill 2005: 308–344; Figure 2.1). The term 'lute' as used in the present context refers to the ancient long-necked plucked-string instrument that was somewhat similar to the much later European guitar and lute in basic construction and manner of playing. Lute-like instruments are known to have existed in Mesopotamia from at least the fourth millennium BCE. Instruments referred to in ancient Near Eastern Arabic texts as *al-ʿūd* (literally 'the wood'), the term from which the name of the Arab oud and the later European 'lute, luth, Laute' are thought to have derived, may have been brought to Mesopotamia from northern India.[3]

Lutes are most plentifully attested in Mesopotamia and Egypt. Nevertheless, Braun provides evidence of the early presence of lutes in the Levant (Braun 2002: 81, Illustration III.4 [Tell el-Ajjûl, Gaza Strip]; 82, Illustration III.5 [Dan]; 84, Illustration III.6 [Beth Shean]). This strengthens the possibility that the Hebrew biblical terms *minniy*(*m*) and *nebel* could have subsumed lutes, as suggested above (§4.3.1). If that possibility should turn out to be reality, lutes were played in Israelite cultic rituals, and in royal households. However, as matters stand it is not known whether any of the Levantine lutes discussed by Braun (2002: 80–84) was associated with cultic activity. The lute from Dan, at any rate, most likely was not: it is depicted as being played by a folk musician (Braun 2002: 81–83). Monika Schuol (2004: 108) wonders whether the Anatolian *ḫuḫupal* (§2.2.2) might have been a lute.

There is iconographic evidence of lutes in cultic activity in Anatolia in antiquity (e.g. Dumbrill 2005: 337, Plate 41; 339, Plate 48). Decorative friezes round the outsides of vases from the Old Hittite period (*c.*1600–*c.*1460 BCE), excavated at İnandıktepe (vase A) and Hüseyindede (vases A and B), depict long-necked lutes and other instruments played in cultic processions, dance, and sacrificial rituals (Moore 2015: 13–32, 62, 77–79, 156–157; Figures 21, 23, 25, 27, 35, 40, 42, 76). Further evidence that lutes were played during temple rituals is provided by a stone relief from Carchemish (on the border with Assyria), dating to between 1000 and 500 BCE (Dumbrill 2005: 340, Plate 50). It shows a man standing in a dignified pose and playing a long-necked lute. The lutenist may be identified as a temple official (perhaps a priest) by his ankle-length robe which hangs straight down and has a fringed hem and a neatly tied corded waistband. The name of the instrument associated with cultic dance in Anatolia, and identified by Ora Brison (2014: 192) as 'probably a lute' (§2.4.2), is written

GIŠTIBULA (SÀ.A.TAR) in the sources (but compare Schuol 2004: 107–108). The name has no obvious etymological connection with Arabic *al-ʿūd* and Arab 'oud', but may relate to other names for ancient lute-like instruments, such as 'tanbur', 'pandura' and more (Dumbrill 2005: 319; herein n. 3).

The extent to which lutes were associated with cultic activity in Mesopotamia is uncertain. A cylinder impression from Lower Mesopotamia (Uruk Period, *c.*4000–*c.*3100 BCE) illustrates the transportation of a bovine in a reed boat. In addition to the animal, there are three people on the boat: a helmsman, a god (probably Ea) and a female lutenist sitting on the floor of the boat while she plays. The presence of the god implies a cultic event, perhaps the transport of an animal to a place of sacrifice (Dumbrill 2005: 321, Plate 4, with extrapolated detail in Plate 5). Otherwise, lutes in both Mesopotamia and Anatolia are attested in private, domestic and pastoral settings, as well as in connection with cultic activity and state functions (Dumbrill 2005: 326).

Lutes are attested in Egypt from the beginning of the New Kingdom (*c.*1570 BCE) onwards (Lawergren 2001) or a little later (Manniche 1975: 71). Hickmann's catalogue of 1949 includes details and photographs of two lutes preserved intact from Egypt (Hickmann 1949: 160–162, items 69420 and 69421; Plate XCVII–C). The frequently reproduced images of Egyptian lutes depicted in wall paintings and stone reliefs also show the instruments in connection with court and cult, in both formal and informal settings (for the cult, see, for example, Figure 2.1). Lutes are also attested in non-cultic domestic and intimate settings (e.g. Manniche 1991: 10, Figure 2; 42–43, Figure 21; 110–111, Figures 66 and 67). Finds of a miniature lute together with miniature harps in Tomb KV37 at Deir ei-Bahri in Middle Egypt may possibly point to the association of lutes with funerary rites there. However, the small scale of the instruments rather suggests that they may be symbolic grave goods to accompany the deceased on the journey beyond death (von Lieven 2002). It is possible that an element of symbolic ideophony lay behind the deposition (compare §5.2.3.3, after n. 15).

4.3.2.1 Structural features of lutes

The main structural features of the ancient Near Eastern long-necked lute were: (a) a rectangular, oval or circular resonator; (b) a neck extending from the resonator; and (c) strings in tension across the resonator and along the length of the neck. Typically, the resonator was made of a tortoiseshell or a single block of wood hollowed out. The otherwise open front of the resonator was covered with a skin membrane drawn taut, making a flat surface, functioning as a soundboard, at the front of the instrument.

The neck was a more or less round wooden shaft, one end of which was introduced into the resonator and secured by being passed over and under the skin through slits made to receive it. It could function as a fingerboard. Lute necks seem to have been unfretted, but it is possible that on some lutes short lengths of twined gut or leather were tied round the neck as finger guides (compare Dumbrill 2005: 61–62, 312).

The strings were probably normally made of gut; Hickmann (1949: 160–161, item 69421; Plate XCIXA, B) describes and illustrates the remains of an Egyptian lute with three gut strings. They were fastened to a tailpiece near the rim of the resonator (sometimes on the soundboard) at the side of the resonator opposite to where the neck projected into it, in line with the neck. They passed over a bridge and along the neck at the end of which they were secured by a binding or (later) pegs which enabled them to be tuned. Ancient iconographic sources show one to three strings. Dumbrill (2005: 311–315) proposes that lutes were tuned according to patterns governed in some way by the idea of 'god-numbers', and that the tuning patterns determined in turn where frets (if any) were placed. The details are highly speculative, but there can be little doubt that tuning patterns were a feature of ancient lute music.

4.3.2.2 Playing methods

The instrument was held transversely across the front of the player. The neck was cradled in the palm of the player's left hand. It passed between the thumb and forefinger, and the player's fingers curled round it from below to stop the strings as required. The resonator was supported either by the player's right knee or by being clamped against the player's abdomen by the player's upper right arm. Several attestations show the instrument held across the player's chest, rather than across the abdomen, with the resonator appearing to rest on the player's right forearm in the crook of the arm. The fingers of the right hand plucked the strings, in some instances with a plectrum. The neck was typically held horizontally or at an angle slanting upwards from the horizontal, although a downward slanting playing position was not unknown in Egypt during the late Eighteenth and early Nineteenth Dynasties (*c.*1539–*c.*1213 BCE; Manniche 1975: 73 with n. 359; 75).[4]

4.4 Aerophones, 1: lip-vibrated wind instruments

The wind instruments known to have been associated with cultic activity in the ancient Near East were of three types: lip-vibrated instruments (trumpets and natural horns), reedpipes, and edge- and end-blown flutes. Trumpets were straight; horns were curved according to their natural sources. Trumpets and natural horns were valveless. Reedpipes and end-blown flutes typically had finger-holes at intervals along their tubes. The syrinx, a variety of end-blown flute, consisted of several fixed-pitch tubes of different lengths, fastened together side by side.

4.4.1 Trumpets and natural horns

Trumpets and natural horns are attested throughout the ancient Near East but not in all types of cultic activity. They are represented mostly in connection with processions (HB Nehemiah 12.35;[5] §2.3.1; §2.6.4) and warfare (§3.2;

Figure 3.1[?];[6] Figure 4.2), somewhat doubtfully in connection with cultic dance, and apparently not at all in connection with mantic traditions. This may be explained by their appropriateness for display and signalling in ceremonial and military contexts rather than for accompaniment or apotropaic and prophylactic use in kinaesthetic and mantic contexts. There are three notable exceptions. One is the use of conch horns or conch trumpets in liturgical contexts in the Levant; another is the ancient Israelite tradition of the liturgical use of paired metal trumpets blown by priests during sacrifices of burnt offering; and the third the blowing of natural horns (animal or conch) in connection with cultic festivity (§2.2.1).

4.4.1.1 Trumpets

There has been little recent scholarly interest in the organology of trumpets and natural horns except with regard to those instruments as they are attested in the cultic traditions of Levantine coastal regions (Braun 2002: 180–183; §2.2.1) and ancient Israel and Judah as referred to in the HB (Kolyada 2009: 65–86). The biblical trumpets (*ḥatsotserôt*; singular: *ḥatsotserah*) are described as a pair of instruments made of hammered silver (HB Numbers 10.2) but no measurements are given. It is nevertheless natural to assume that trumpets made from beaten sheet metal, rolled to form a tube, would have been straight. This is the form of the barely recognisable trumpet in a painting on a potsherd from fourteenth-century BCE Beth Shean. The sherd was found during excavation of Beth Shean in an area, and at a level that had been occupied by an Egyptian garrison (Braun 2002: 92 with Illustration III.13). Braun (2002: 93) has estimated that the painting represents an instrument about 60 cm long, with a 'cylindrical or slightly conical tube (length ca. 50 cm., diameter 2–3 cm) that gradually splays out into a bell with a [maximum] diameter of some 7 cm'.

Braun (2002: 93) goes on to note that his estimated measurements for the trumpet painted on the Beth Shean potsherd are very close to those of two trumpets from around the middle of the fourteenth century BCE found by Howard Carter in Thebes, in Tomb KV62, the tomb of Tutankhamun (Hickmann 1949: 143–145, items 69850, 69851; Plate LXXXVII–XC; Manniche 1975: 31–32; Manniche 1991: 75–80, Plate 14). The instruments are often referred to as a 'pair' of trumpets but in fact they differ in the metals of which they are made (silver with gold embellishments for one; copper/bronze with partial overlay of gold for the other), size (the silver trumpet is approximately 58 cm long; the copper/bronze trumpet is a little over 49 cm long), and find spots (the burial chamber itself for the silver trumpet; an antechamber adjacent to the burial chamber for the copper/bronze trumpet) (Table 4.2).[7] Carter's notes cataloguing the finds (herein n. 7) seem to imply that the silver trumpet is made in two sections: one comprising the bell, the other the tube, and that the copper/bronze trumpet is made in four sections: one comprising the bell and the remaining three the tube. However, Jeremy Montagu examined the copper/bronze trumpet in 1973 and formed the opinion that it is also made in two

Table 4.2 Basic measurements of the trumpets from Tutankhamun's tomb (KV62), according to two twentieth-century sources

Measurements of silver trumpet	*Carter. Howard Carter Archives, No. 175. Griffith Institute, University of Oxford**		*Hickmann 1949: 143–144, item 69850 & Plates LXXXVII, A & B–LXXXIX, A; XC, A, B & C*	
Item	*Measurement (cm)*	*Remarks*	*Measurement (cm)*	*Remarks*
Max. diameter of bell	8.8	given	8.2	given
Length of bell	–	not given	10.8	deduced
Length of tube	–	not given	47.4	given
TOTAL LENGTH	58.0	given	58.2	given

Measurements of copper/bronze trumpet	*Carter. Howard Carter Archives, No. 050gg. Griffith Institute, University of Oxford**		*Hickmann 1949: 144–145, item 69851 & Plates LXXXVII, A & B; LXXXIX, B; XC, A, B & C*	
Item	*Measurement (cm)*	*Remarks*	*Measurement (cm)*	*Remarks*
Max. diameter of bell	9.0	given	8.4	given
Length of bell	8.7	given	9.1	deduced
Length of tube	40.4	given	40.3	given
TOTAL LENGTH	49.1	deduced	49.4	given

* www.griffith.ox.ac.uk/gri/carter/175-c175-1.html

sections like the silver trumpet (Montagu 1976: 115–117; Montagu 1978: 133–134). Neither Carter's cataloguing nor Montagu's examination was undertaken scientifically; both men relied on the evidence of the naked eye alone, but neither produced sufficient information to resolve the matter.[8] The question of the construction of the tube of the copper/bronze trumpet therefore remains open. A wooden 'core' or 'keeper' was found with each instrument. The cores are made of solid light wood and are copiously decorated. They are shaped to fit inside each instrument as protection against denting or crushing during storage and transport.

The two Egyptian trumpets from the tomb of Tutankhamun were clearly ceremonial instruments, probably intended for use on occasions when the pharaoh was present. In contrast, biblical tradition presents the two silver trumpets of the ancient Israelites as having two functions, neither of which was directly ceremonial. One was to give military-style signals for the Israelites when they were encamped and when they went into battle (HB Numbers 10.1–9). The

other was to sound during prescribed sacrificial rites on special festivals and days of distinction (HB Numbers 10.10). According to the written sagas, prophecies and praises of the ancient Israelites and early Jews, the latter tradition was maintained until the destruction of the Jerusalem Temple in 70 CE.

A relief from the Egyptian temple of Taharqa at Kawa built between 684 and 680 BCE (Welsby 2002: 34–35; Smith 2012) shows several instrumentalists, including two trumpeters carrying long trumpets (Macadam 1955: Plates XIV and LIIIa; Manniche 1991: 80–81, Illustration 48; Figure 4.2). The trumpeters are identified as such by the hieroglyphs above each one (Manniche 1991: 80). It is noteworthy that the trumpets are carried vertically (for space-saving and protection), and that one of the trumpeters is carrying two trumpet-shaped objects, one of which is perhaps a core for the other which is the actual trumpet. Alternatively, all three objects could be intended to represent trumpets, but of different lengths for different pitches, as implied by Lise Manniche (1991).

The trumpets described above were 'long' trumpets. Short trumpets were probably most usually made of bronze or copper; carved stone was also sometimes used.

The sound quality of both long and short trumpets would have been inferior to that of corresponding modern valveless instruments (bugles and hunting horns, for example). The metal would have been less refined than that of modern instruments, and the walls of the tubes thicker than in today's trumpets, bugles and hunting horns. Consequently the sound would have been somewhat dampened in comparison. In addition, the bore of the tube at the mouthpiece seems to have been relatively wide compared with modern instruments, making it difficult for the player to produce and sustain stable notes. Very few notes would have been obtainable. These observations were verified as far as long trumpets are concerned in the 1930s and 1940s when attempts were made to play restored versions of the Tutankhamun trumpets under controlled conditions (Manniche 1991: 76–77).

Long trumpets would probably have been used mostly for ceremonial and processional purposes. Short trumpets, on the other hand, were well suited to busy or dangerous circumstances such as day-to-day use in military camps, during military manoeuvres and on the battlefield. They were easily portable, less physically vulnerable than long trumpets, and required only one hand to hold them for playing whereas long trumpets required two hands (clearly shown in Lawergren 2001: 451, drawing j).

4.4.1.2 Horns

Horns for musical use, especially animal horns, were no doubt ubiquitous in the ancient Near East on account of their wide availability, portability and low cost of manufacture.[9] However, apart from their frequent mentions in the HB in connection with all but one of the five types of cultic activity discussed in Chapters 2 and 3 (mantic traditions are not represented), they are seldom attested in connection with cultic activity in sources from outside the Levant, and not at all in

Egyptian sources. In Anatolian and Mesopotamian sources the attestations are concerned with warfare, more specifically with mustering troops and going out with them to battle (§3.2.2; §3.2.3; Figure 3.1).[10] It is possible that at least one of the instruments played by Elamite musicians in the procession described at §3.2.3 (in the paragraph preceding its depiction in Figure 3.1) was a horn. In Israel and Judah, the sound of the natural horn is attested in connection with liturgy and ritual (e.g. HB Ps. 81.3(4); §2.2.1 before n. 8), processions with and without cultic dance (e.g. HB 2 Sam. 6.14–15; §2.3.2 two inset quotes after n. 34), and warfare (for mustering troops – HB Judges 3.27; 6.34 – and directing them in manoeuvres and on the battlefield – HB 2 Samuel 18.16; §3.2.1 after n. 11).

Two words are used in the HB to designate natural horns: *shôfar* and *qeren* (*qarnaʾ*, a non-Hebrew variant, in HB Daniel 3.5, 7, 10, 15). The word *qeren* 'horn' is generic for the horn of an animal. It can also be used for a vessel made out of an animal horn (and by extension as a symbol of plenty or generosity) or for a musical instrument made from an animal horn. Context determines the sense of the word in each case. The word *shôfar* 'shofar', on the other hand, is generic for a musical instrument made from a natural horn. Most usually it implies a ram's horn, but it could also imply the horn of a wild goat such as ibex or chamois. The latter point is particularly apt in relation to the biblical narrative of the Battle of Jericho in HB Joshua 6.1–27 (Smith 2011: 158–159). Braun has proposed that *shôfar* could in addition imply a conch horn/trumpet known from the Levant (Braun 2002: 181–183). In other areas of the ancient Near East it seems that the basic term *qrn* 'horn' was used for natural horns irrespective of the uses to which they were put. Iconography typically represents the natural horn as a short, curved animal horn (Dumbrill 2005: 350, Plate 2).

Natural animal horns had to be prepared for use as musical instruments. The inside had to be cleaned and scraped to give as even an airflow as possible. The blowing end had to be provided with a mouthpiece with a bore narrow enough for ease of note production, and with a smooth rim for comfort against the lips. The sound quality of those instruments would have been somewhat dull compared with metal horns or short trumpets since the keratin of animal horn does not reflect sound well. Conch trumpets would have had a clear sound on account of their hard, smooth, thin shell of natural chitin, but they were brittle and therefore extremely vulnerable to physical damage. By contrast, animal horns were relatively robust. Rams' horns were considerably curved; wild goats' horns were almost straight; conch shells were convoluted. Two or three notes of the harmonic series would have been obtainable on these instruments. Skilled players on rams' horns may have been able to produce additional notes by varying the embouchure and air pressure. One or more finger-holes along the instruments could give access to more notes than those obtainable by default (as, for example, in the case of the conch horn/trumpet depicted in Braun 2002: 182, Illustration IV.38a, b).

4.5 Aerophones, 2: reed-vibrated and edge- and end-blown pipes

In modern discussions of and references to wind instruments from antiquity, the designation 'pipe' is often used as a blanket term for any tubular aerophone not of the lip-vibrated type. This usage is appropriate especially where a broad distinction from horns and trumpets is desirable, or where a more precise identity is unknown. In the discussions below, the term 'pipe' will be used similarly in general contexts, but will be further qualified as 'reedpipe' and 'flute' (edge-/end-blown pipe) where greater precision is appropriate and possible. Each of those terms is susceptible of closer definition where sources provide sufficiently detailed information. Pipes could be made of bone, cane, metal, reed, or wood.

4.5.1 Definitions

The term 'reedpipe' is used here to signify an aerophone pipe in which sound was produced by blowing into one end of its open tube through a single or double reed, causing the reed(s) to vibrate. Reedpipes could have a single or double tube, the two tubes splayed or close together laterally (e.g. Hickmann 1949: Plate 86A, B). The term 'flute' is used here to signify a reedless aerophone pipe that was not a horn or trumpet. Flutes may be more narrowly defined as 'end-blown' or 'transverse'. The term 'end-blown flute' implies a pipe blown at its open end. There were two types of end-blown flute: an edge-blown flute (a pipe blown across an open end of its tube so as to split the stream of air on the edge of the rim opposite the player's lips, thereby producing a note), and a 'duct flute' (a pipe blown into an open end of its tube through a mouthpiece fixed into, or moulded from one end of the tube). The mouthpiece was constructed as a duct that split the stream of blown air, thereby producing a note. Modern analogies for ancient duct flutes are the recorder (*Blockflöte*, *flûte à bec*) and the flageolet. End-blown flutes could have one tube or two, perhaps of different lengths. Some long rim-blown flutes of the type called 'ney' or 'nay' were played obliquely as illustrated, for example in a wall painting from the tomb of Nenkheftka at Saqqara, from the Old Kingdom (Fifth to Sixth Dynasty, *c.*2450–*c.*2175 BCE) and in two registers of a wall painting from the tomb of Hetpet at Giza (Hetpet was a priestess during the Fifth Dynasty, *c.*2450–*c.*2325 BCE).[11] The syrinx or panpipes was a set of several small rim-blown flutes the tubes of which varied in length and were fastened together side by side. The term 'edge-blown' includes transverse flutes (sometimes known as cross flutes); sound was produced by blowing across a hole bored at a point along the instrument's tube one end of which may or may not have been closed. Transverse flutes were always single-tube instruments. Reedpipes and most types of flute had finger-holes at intervals along their tubes for the production of a variety of notes (e.g. Figure 4.3).[12]

Figure 4.3 Egyptian double-tube reedpipe for single reeds. Possibly Twenty-Second Dynasty (*c.*945–*c.*715 BCE). Paris, Louvre, exhibit E 212 (A et B). Blowing ends are at the top of the image. Each tube has six finger-holes. The information card accompanying the exhibit designates the instrument as a 'Clarinette double', and goes on to say, 'The two pipes were at one time glued together; the straw reeds are missing'.

Photo © RMN-Grand Palais (musée du Louvre). Used by permission.

4.5.2 Identification in ancient iconographic sources

Precise identification of the different types of pipe represented in ancient iconography is not always possible. Medium length or long pipes depicted as being played vertically, or nearly so, are likely to have been end-blown flutes since reedpipes required a near horizontal playing position in order to direct the flow of air through the tube with sufficient pressure to cause the reed(s) to vibrate. Double-tube pipes shown with tubes splayed outwards from the blowing end and played horizontally are likely to have been reedpipes on account of both the playing

position and the close similarity of design to that of the ancient Greek *aulos*, a reedpipe with similar characteristic design, common throughout the ancient Near East. Otherwise, especially where single-tube pipes are concerned, there is often insufficient detail provided by the sources to permit certainty about what type of pipe is depicted. Iconographic representation of transverse flutes is uncertain and extremely rare (Dumbrill 2005: 350, Plate 1[?]).

4.5.3 Identification in ancient written sources

Ancient written sources and their modern translations can also present problems of identification. It is often unclear from the ancient texts whether reedpipes or flutes are meant; the unexplained use of 'reed pipe', 'reed-pipe', and 'reedpipe' in many modern translations, can leave the reader wondering whether a 'reedpipe' in the present sense of the term is meant, or an unspecified type of pipe made from a reed. Occasional anomalies and inconsistencies also cloud the picture. A case in point is the Greek rendering of the Hebrew term *'ûgab*, meaning perhaps a rim-blown flute or a syrinx. The term occurs at four places in the HB; but at those places in the Septuagint (LXX; the ancient Greek translation of the Hebrew Scriptures), four different terms are used. Another case is the English translation of the Sumerian word **gi-di** in the ETCSL edition of two Sumerian mythological texts. In one of those texts, 'Inana's descent to the nether world', at line 353, **gi-di** is translated 'flute' whereas in the other, 'Ninurta's exploits: a **šir-sud** (?) to Ninurta', at line 617, the same word is translated 'reed-pipe'. A double problem is created by Dumbrill's translation of the Sumerian expression **gi-di-da** as 'side flute' (Dumbrill 2005: 348). In addition to the question of whether Dumbrill's translation is intended to mean a transverse flute or a long flute played obliquely, sources show that the Sumerian expression **gi-di-da** is not attested as an independent word, but as a component in compounds which might mean 'flute player' (the component '**gi-di-**', which might mean 'flute' or 'reed-pipe', is nevertheless common). The above points are exemplified in the Appendix, where detailed source references are given. Dumbrill creates an additional puzzle when he names the '**TIGI**' as an instrument in a philological list of ancient Sumerian non-lip-vibrated aerophones, perhaps following an older generation of scholars (e.g. Galpin 1937: 2; Sachs 1940: 72). The present consensus is that the **TIGI** (or **tigi**) was a drum (§5.1.3; §5.1.4).

4.5.4 Archaeological remains

Archaeological remains of non-lip-vibrated pipes are relatively numerous and surprisingly well preserved considering the fragility and small size of most of the objects. They include some 12 specimens of short single-tube rim-blown flutes discovered in the southwestern Levant (Braun 2002: 110–112), fragments of one or perhaps two silver pipes discovered in Ur in Mesopotamia (Woolley 1934: 258–259), and numerous Egyptian rim-blown flutes and reedpipes (Hickmann

1949: 113–142; Manniche 1975; Manniche 1991; Lawergren 2001: 451, drawings g, h, i). The remains of the Levantine pipes span a period of roughly 2,000 years from the third millennium BCE (a flute from Megiddo) to the seventh or sixth century BCE (a flute from En Gedi) (Braun 2002: 111, Illustrations III.29 and III.30). They range from 7 to 12 cm in length and are made of bird or goat bones. Some of them have a hole bored midway along their tubes, which could be used either for transverse blowing or for fingering during rim-blown playing. The Mesopotamian remains were discovered by Sir Leonard Woolley during his excavations at Ur between 1926 and 1931. In Private Grave (PG) 333, dating to *c.*2500 BCE, Woolley found five fragments of slender silver tubing which he reckoned were the broken remains of a silver double pipe, each tube of which was approximately 26 cm long, and had lateral finger-holes (Woolley 1934: 259, Figure 68).[13] This silver double pipe was most likely a reedpipe.

Although the extant remains of pipes from Egypt are numerous, many cannot be assigned a provenance and a date, and several of those that can are from after the end of the Iron Age, thereby falling outside the upper chronological limit set here. This is aptly illustrated in Hickmann's catalogue of pipes exhibited in the Cairo Museum during the immediate post-war years (Hickmann 1949: 113–142). Of the 31 pipes he lists and describes there, only ten are assigned both provenance and date, and of those, eight are assigned dates prior to the end of the Iron Age.[14] Thus only a quarter of the pipes catalogued by Hickmann are of certain relevance here. Six of those eight pipes were found together in a wooden instrument case in Tomb KV37 at Deir el-Bakhit, Sheikh ʿAbd el-Qurna, in the Theban Necropolis on the west bank of the Nile (Hickmann 1949: 134–138, items 69836 and 69836a–f; Plate 85A, B).[15] They are dated to the 'Nouvel Empire (Période intermédiaire)' (Hickmann 1949: 134), meaning, presumably, the Third Intermediate Period (*c.*1069–*c.*664 BCE), which followed the New Kingdom. These six pipes are made of reed, are slender, vary from 23 to 36.4 cm in length, and have from two to five finger-holes in line laterally. Each pipe varies in external diameter from 0.5 to 0.6 cm and has extremely thin walls, on average no thicker than 0.05 cm. Hickmann places the instruments in the category 'hautbois' (oboe(s)); this term, though anachronistic, is used by Hickmann to specify pipes with double reeds.[16] The wooden instrument case is cylindrical, 50 cm long, and has an external diameter varying between 4.8 and 5 cm.

Another of the eight relevant pipes in Hickmann's catalogue is from Tomb KV1379 (tomb of Iabtina) near Deir el-Medina, also in the Theban Necropolis (Hickmann 1949: 119, item 69817). It is an end-blown rim-blown flute made of pale reed, dated to the Eighteenth Dynasty (*c.*1539–*c.*1292 BCE). It is approximately 74.1 cm long, and has three lateral in-line finger-holes in the course of the 20 centimetres of the tube furthest away from the blowing end. It belongs to the type of end-blown rim-blown flute played obliquely, known as 'ney/nay' ('nây' in Hickmann's categorisation).

The last of those pipes is from Beni Hasan, a necropolis on the east bank of the Nile approximately halfway between Luxor and Cairo (Hickmann 1949:

item 69814). It is a rim-blown flute of the ney type, made of dark reed. It dates from the Middle Kingdom (*c.*2010–*c.*1630 BCE). Hickmann gives its length as 91.7 cm, which places it among the longest such flutes attested in the Near East prior to the end of the Iron Age. There are three lateral in-line finger-holes distributed along the one-third of the instrument's length furthest away from the blowing end. The long reach to the finger-holes makes it likely that the flute would have been played obliquely.

4.5.5 Use in cultic contexts

While pipes were ubiquitous in the ancient Near East, evidence of their use in connection with cultic activity varies considerably from region to region. In the Levant they are firmly attested in connection with all types of cultic activity except warfare. In Anatolia, pipes are attested in processions (§2.3.3) and in oblique relation to warfare (§3.2.2). Mythological texts from ancient Mesopotamia may be taken to imply the use of pipes in liturgies and rituals there, although the types of pipe cannot be identified with certainty (§2.2.3). It may also be reasonable to infer from the reference to a 'whirling dance', in Part 7 of the mythological poem 'The Song of Agushaya', that pipes were played in connection with cultic dance (§2.4.3 between n. 47 and n. 48). Pipe playing in connection with warfare is attested for both Mesopotamia and Elam in a limestone relief from Nineveh depicting a procession of retreating Elamites which includes two players on wind instruments. The instruments are difficult to identify, but seem to be of the wrong proportions to be trumpets or horns; they are therefore most probably pipes (§3.2.3; Figure 3.1). Depictions and remains from ancient Egypt attest to the use of pipes in a variety of cultic contexts. Wall paintings and reliefs are often sufficiently explicit to distinguish between reed-pipes (especially the variety with two splayed tubes) and flutes. There are firm attestations in connection with liturgies, rituals, processions, and cultic dance (e.g. Figure 2.1; Figure 4.3(?)). However, pipes are not attested in connection with mantic activity and warfare.

Notes

1 It seems that the supposed equation of 'harp' with biblical *nebel* was the basis for Caubet's opinion that the term *niblu* in a Ugaritic text, which refers to a musical instrument, means 'harp' and thus attests to the use of the harp at Ugarit: the sound of the consonants in the word *niblu* are the same, and in the same order as the consonants which form the root *nbl* of the Hebrew word *nebel*, implying or strongly suggesting common etymology. See Caubet 2014: 176–177 (as cited in the text).
2 Compare LXX Psalm 150.4, which has *chordais* 'strings'. LXX Psalm 44.9 (the LXX equivalent of HB Psalm 45.9) does not mention music or instruments.
3 On the early history of the lute, the oud and related instruments, and on the etymology of their names, see, in addition to the references in the text, During 1988; Hassan et al. 2001: 61–62; Smith 2002; von Lieven 2002; Nettl 2012 (especially the subsection '*Instruments*' [for lute, oud, and *tanbur*]). I am indebted to Christopher Page for advice on this subject.

4 In later antiquity there may have been a fashion (perhaps limited in place and duration) for playing the lute with the neck slanting downwards from the horizontal. In some ancient depictions of that practice, it seems that the position of the hand holding the neck is reversed so that the back of the hand is towards the player. See the iconography from the Seleucid period in Dumbrill 2005: 341–344 (Plates 51–60, especially Plates 54 and 56).

5 Although HB Nehemiah is a post-exilic text, the association of priests with metal trumpets (*ḥatsotserôt*), referred to in HB Neh. 12.35, reflects ancient Israelite tradition (see §2.2.1).

6 It is possible that the wind instruments in Figure 3.1 are trumpets or natural horns, but the image is not clear enough for certainty.

7 The trumpets were found by Howard Carter shortly after his discovery of the tomb of Tutankhamun (KV62) on 4 November 1922. Carter's handwritten catalogues and sketches of the trumpets are held in The Howard Carter Archives at The Griffith Institute, University of Oxford, online at www.griffith.ox.ac.uk/gri/carter/175-c175-1.html (silver trumpet), and www.griffith.ox.ac.uk/gri/carter/050gg-c050gg-1.html (copper/bronze trumpet). Hickmann's catalogue of instruments in the Cairo Museum includes details and photographs of the trumpets (cited above in the text). Carter's and Hickmann's measurements differ by 1 to 6 mm (Table 4.2), hence the approximate figures I give in the text. Manniche (1975: 32) gives the same measurements as Hickmann, but in tabular form.

8 Carter's circumstances in Egypt in 1922 were such that he probably would not have had immediate access to scientific equipment or personnel. Registering the finds and identifying them in appropriate archaeological terms would have been the pressing needs at that time. It is therefore possible that in Carter's sketch of the copper/bronze trumpet the two lines drawn at intervals round the tube do not have any significance beyond marking the extent of the two sections with gold overlay. Montagu writes that his own examination of the copper/bronze trumpet was 'without probing or radiography' (Montagu 1976: 116; Montagu 1978: 134), and later confirms that his examination was visual alone:

> I was not allowed to touch it [the copper/bronze trumpet], but one of the [British] Museum's staff held it and turned it to every angle for me. I was able to see much detail that had not been previously recorded and to correct other details .
>
> (Montagu 2014: 71)

Montagu does not say how much of the detail of the jointing along the inside of the tube (important for determining whether the tube is constructed as a single unit) he could see (the tube is *c.*40.3 cm long, less than 2 cm in external diameter for more than two-thirds of its length, and only 2.8 cm in external diameter at its widest point where it joins the bell).

9 The rhyton (Greek: *rhuton*) is not discussed here. It was a more or less conical, cup-sized container for liquids for drinking and libation, and was widely used in antiquity from the Bronze Age onwards in Greece, the Aegean and the Near East. Despite its frequent attestation in the form of a bovine horn, it was generally not made from animal horn and not used as a musical instrument. The remains of 18 rhytons (all made of ceramic) are noted in Hickmann 1949: 147–151, items 26650–26665, 43258, 43539; Plates XCI, A; XCII, A, B).

10 Dumbrill (2005: 350, Plate 2) gives a hand-drawn copy of an image from a painting from *c.*2000–*c.*1500 BCE showing a male horn player, with the caption 'horn player and dancer'. However, there is no indication whether the setting is cultic.

11 The tomb was first discovered by Carl Maria Kaufmann in 1909, and rediscovered by an Egyptian expedition in 2017 (Mays 2018).

12 Figure 4.3 (Louvre, exhibit E 212 A et B) has the caption: 'Les deux tuyaux étaient autre fois collés l'un à l'autre; les anches en paille ont disparu.' Two similar instruments (but with five finger-holes instead of six) are described and illustrated in Hickmann 1949: 139–142 (items 69837 and 69838, respectively, with Figures 57 and 60, respectively), and Plate 86 A, B.

13 A conjectural reconstruction of the fragments of the silver pipe(s) from Ur, PG333, by Theo J. H. Krispijn, beside a photograph of the original fragments (from Schlesinger 1939: Plate 18, showing the fragments ordered differently from those in Woolley's sketch), is pictured in Krispijn 2008: Slide 20, at: http://caeno.org/newagain_files/sitewide/papers/Krispijn_MesopotamianMusic_Slides.pdf.

14 Of the 31 pipes listed and described by Hickmann (1949: 113–142), 20 are single-tube reedpipes made of reed, nine are end-blown rim-blown flutes (seven made of reed, one made of bronze and brass, one made of wood), and two are two-tube single-reed pipes made of wood.

15 On the Theban Necropolis, Tomb KV37 (and Tomb TT1379 which is mentioned in the succeeding paragraph), see Smith 1992. A map of the Theban Necropolis area is provided in Smith 1992: 195, Figure 1. Smith's discussion of the Nécropole de l'Est (Eastern Necropolis) in Deir el-Medina – an area within the Theban Necropolis (Smith 1992: 218, 229–231) – includes the observation that the 'workers' village' there appears to have belonged to a group of 'artisans and musicians'. A photograph of the 'workers' village' in the Eastern Necropolis in Deir el-Medina is available at http://media.ameliapeabody.eu/2015/04/image2-1024x455.jpg; photograph credit: Steve E.-F. Cameron, Creative Commons. (In the copy of Smith 1992 I consulted, the name 'Nécropole de l'Est' had the wrong accents at every appearance.) The word 'Deir', with which the names of several locations in the Necropolis begin, means 'monastery, convent' in Arabic. It arises from the area's occupation by Copts in late antiquity and its consequent use for Christian burials, worship, and communal dwellings. Compare also the reuse of Egyptian tombs by the Egyptians themselves, as illustrated by the history of TT45 (§2.3.5, n. 37). For background to at least part of the Theban Necropolis at the time of the finds described here, and for a historical overview of the same from the early twentieth century BCE to the eighth century CE, see Polz et al. 2007 and Polz et al. 2012, respectively. For background to the Coptic presence in the Theban Necropolis, see Górecki 2014: especially 130–135, 149 (map).

16 In addition to the anachronism 'hautbois' as a convenient designation for a pipe with a double reed, Hickmann (1949) uses the anachronism 'clarinette' for a pipe with a single reed. Manniche (e.g. Manniche 1975, 1991) uses the English equivalents 'oboe' and 'clarinet' in the same way.

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5 Musical media, 2

Membranophones (drums) and idiophones

5.1 Membranophones (drums)

Ancient iconographic sources from the ancient Near East depict several different types of drums in many different sizes, used in both cultic and non-cultic settings (general descriptions and iconography: Hickmann 1949: 107–111, Pl. LXXI–LXXX; Lawergren 2001: 451, drawings b, d, e, f; Braun 2002: 29–31, 55–58; Dumbrill 2005: 359–383; Kolyada 2009: 107–111; see also RAVA: 'Trommel und Pauke'). It is extremely rare that written sources from antiquity provide sufficient detail to permit an unequivocal identification of a type of drum (see further §4.1.8). Most of the attested types of drum were intended to be played with the hand or hands. The expression 'playing with the hand' is used here for convenience and should be regarded as subsuming the possibility of playing with individual fingers as well as with the flat of the hand.

5.1.1 Hand drums

The most widely attested type of drum played in connection with cultic activity in the ancient Near East was the simple hand drum. It consisted typically of a single membrane stretched over one side of a thin, shallow wooden frame which was circular in most cases (resembling a modern tambourine without jingles; sometimes referred to as a 'timbrel' in translations) but could also be rectangular or square. Such drums were usually about 20–40 cm across. The frame was approximately 5 cm deep, providing sufficient purchase for one hand to hold the instrument while the other played it. A possible advantage of the rectangular and square designs over the circular one may have been that any springiness in the frame could be harnessed to ensure that the membrane was always taut. In this regard it is noteworthy that some images of rectangular and square hand drums show the frames bowed slightly inwards, as if pulled by the membrane against their natural tendency to be straight (e.g. Hickmann 1949: 110, item 69355 with Figure 41; Pl. LXXIX).[1] The hand drum is the only type of drum mentioned in the Hebrew Bible (HB); it is called *tof* (plural: *tuppiym*, occasionally *tôfefôt*). Tradition regards it as a circular drum, but neither the biblical text nor slightly later related Jewish texts specify its shape, size or material

components. The name *tof* could therefore hypothetically refer to a rectangular or square hand drum, or generically to hand drums of any shape (Kolyada 2009: 107–111).

5.1.2 Hourglass-shaped drums

Hourglass-shaped drums in a variety of sizes, with a membrane at one end, are well attested in Mesopotamia. They could be stood on a flat surface and played by two hands on the one membrane. If small enough, they could be held round their 'waist' by one hand and played by the other, or held between upper arm and ribs and played by the hand of the free arm. It is possible that the Anatolian *ḫuḫupal* was a small drum of this type (§2.2.2; Güterbock 1995). While the hand drum is the only type of drum mentioned in the HB, the find of a small terracotta figurine of a woman holding an hourglass-shaped drum under her left arm, from Gilat in the western Negev (approximately 10 km northwest of Beer Sheba), attests to the presence of that type of drum in the southern Levant in the Early Bronze Age (Braun 2002: 55–58 with Illustration II.5).

5.1.3 Barrel-shaped and cylindrical drums

Barrel-shaped and cylindrical drums with a membrane at each end or one end are represented in a number of iconographic sources from the lands of the Fertile Crescent and Egypt. They were most usually 'slung' drums, that is, they were designed to be carried horizontally in front of the player, slung from a strap fastened to each end of the drum and passed behind the player's neck or over one shoulder. The player's two hands were thus free to play the instrument, each hand at its respective nearest membrane. Ancient Egyptian processional drums are typical examples (§2.3.5; Figure 4.2). The Anatolian *arkammi* and *galgalturi* were possibly drums of this type (§2.2.2; Schuol 2004: 112–119), as well as the Mesopotamian **tigi** and **balaĝ** (also transcribed **balang**) drums (§2.2.3; §2.3.4). However, while several texts from Anatolia list the *galgalturi* alongside drums (Brison 2014: 193), it is generally thought that the term *galgalturi* refers to cymbals, perhaps a paired set, on account of its being written without the determinative prefix for 'wood' (an identifier for a drum) but sometimes with the determinative for metal (copper and bronze), and occasionally with the adjective 'bronze' (Güterbock 1995; Schuol 2004: 124–128; Brison 2014: 191–193; Franklin 2016: Section 6, at n. 76 with additional literature).[2]

The construction of slung drums was probably very simple. In the case of a cylindrical drum, a hollowed log of wood of appropriate length and circumference would have provided the body of the instrument, a method similar to that suggested by Mirelman for constructing **ala** drums (see below). In the case of a barrel-shaped drum, wooden slats could be fastened edge to edge round perhaps three wooden hoops, one at each playing end, and one midway between those two. The barrel shape would have been produced by giving the middle hoop a larger diameter than the hoops at each playing end. In both types of

slung drum, cords were stretched from the overlap of the membranes at each end of the drum, at regular intervals round the drum; they served to hold the membranes in place and keep them taut. Slung drums were usually highly decorated.

5.1.4 Large drums

All the drum types described in the three preceding paragraphs were small enough to be portable. However, there were two types of large drum which were generally too cumbersome to be moved easily. One was an extremely large kind of frame drum, depicted as almost as tall as a human when stood on its rim. The other was the kettledrum. Both types seem to have been peculiar to Mesopotamia.

The large frame drum may be represented here by the **ala** (Akkadian: *alû*) drum, some specimens of which had double membranes (Franklin 2013: 50 with n. 32; Gabbay 2014: 129, n. 2; Mirelman 2014; Shehata 2014: 109–110). The frame of the instrument is likely to have been made from a hollowed out thin section of a large tree trunk (Mirelman 2014: 154–155). A salient feature is a ring of metal rivets, like 'stars', used to secure the membrane along the circumference of each drum (Mirelman 2014: 156).

The kettledrum (§2.2.3), usually made of bronze or copper, may be exemplified by the **lilis** drum and the **ub** drum. The **lilis** (also transcribed **lilissu**) is the only Mesopotamian drum that can be identified with certainty; this is made possible by the existence of a labelled image on a Seleucid period ritual tablet (Gabbay 2014: 134; Shehata 2014: 115 with n. 69). Other drums, for example the **sim/šem/***ḫalḫallatu*(*m*), the **ub**, the **tigi** and the **balang**, may also have been kettledrums.[3] Not only do the written forms of their names possess a significant number of common lexical elements, but also those instruments share the same cultic environment, share similar ritual circumstances, and embody divine powers – features which are present to a marked degree in the **balaĝ** (Shehata 2014). However, it is worth noting that the evidence enabling identification of the **lilis** as a kettledrum is late (Seleucid period: *c.*312–63 BCE) in relation to the period covered here. Until earlier corroborative information is discovered, the extent to which it is legitimate to apply the Seleucid period evidence retrospectively is uncertain.

5.1.4.1 The designation **balaĝ/balang**

The application of the designation **balaĝ** has an unusual history. Prior to the beginning of the second millennium BCE, it seems that the **balaĝ** was regarded as a stringed instrument, a lyre, but that during the early second millennium a change came about which led to the **balaĝ** being regarded as a drum (Gabbay 2014; Shehata 2014: 116–121). In the light of recent research, it might be appropriate to regard the term **balaĝ** as connoting not necessarily a specific cultic or ritual item, but rather a religious concept which became applied to

cultic and ritual items associated with the ritual expression of that concept. Thus, the term '**balaĝ**' could be attached to, for example, a lament, a prayer, a lyre, or a drum.[4]

5.1.5 Methods of playing the drums

Methods of playing the drums were briefly mentioned earlier as being, most naturally, with the hands and fingers (the latter being especially appropriate to small drums). These observations are based on iconography since, while there are several textual references to the playing of drums in cultic contexts, there seem to be none that specify the hand or fingers.[5] However, three Sumerian texts may possibly refer to the use of drumsticks in cultic contexts:

1. 'Enki's journey to Nibru', ETCSL 1.1.4, line 62: 'the **balaĝ** drum with the drumsticks' [the CDLI translation does not have 'with the drumsticks'];
2. 'The Keš temple hymn', ETCSL 4.80.2, line 117: 'the drumsticks (?) are made to thud' (§2.2.3, preceding n. 15); and
3. 'The song of the hoe', ETCSL 5.5.4, lines 71–72: 'The temple of Ĝeštin-ana resembled the drumsticks, [line 72:] the drumsticks of Mother Ĝeštin-ana that make a pleasant sound'.

The coupling of '**balaĝ** drum' and 'drumsticks' in the first reference listed above suggests that perhaps the larger types of drum – the **ala** and the kettledrums – could be played with a drumstick or some kind of beater. In the second reference above, the translation 'drumsticks' is tentative. This not only means that there is doubt about the translation itself, but also suggests that the notion of a drumstick in the modern sense may be inappropriate. Perhaps 'drumstick' here and in other references could subsume other kinds of beater.

Drumsticks, or perhaps the techniques required for using them, seem to have been valued in themselves. A purportedly autobiographical poem about Išme-Dagan's achievements announces at one point, 'I have mastered the drumsticks' ('A praise poem of Išme-Dagan' [Išme-Dagan A], ETCSL 2.5.4.01, line 371); and a mythological allegory about the god Nanna says, 'They play for him ⌞on the drumsticks⌟ [one manuscript has instead: "on the churn"]' ('The herds of Nanna' [Nanna F], ETCSL 4.13.06, line 17; Black et al. 2004: 145–147). A focus on the drumsticks themselves is also evident in the third of the numbered references in the inset list above.[6]

5.1.6 The sound of the drums

Little is known for certain about the sound of the drums and how it was perceived by the ancients. Two passages from 'The building of Ninĝirsu's temple' (Gudea, cylinders A and B, ETCSL 2.1.7) have, respectively: 'Its drum hall is a roaring bull' (line 773), and, '**ala** drums roared for him like a storm' (line 1243), both of which are suggestive of deep, powerful, sustained sounds. If the

quotation at 2 in the list above is to be understood as meaning that the 'thud' is the sound made when the drumsticks hit the membrane of the drum, the impression given is of a sudden, detached, deep sound.

The **tigi** drum is habitually referred to as 'sweet'. The following are typical: 'the grand sweet **tigi** is played for him' ('The Kesh temple hymn', ETCSL 4.80.2, line 119); 'have the sweet-sounding **tigi** instruments play' ('Inana and Enki', ETCSL 1.3.1, line 246); and 'the sweet-toned **tigi** instrument' ('The building of Ninĝirsu's temple' [Gudea Cylinders A and B], ETCSL 2.1.7, line 1041). It seems also that, perhaps by association, playing the **tigi** was 'sweet': a voice lamenting the demise of the temple at Nibru asks 'Why did he [the city's lord who became angry with it] transform the appearance of the temple which knew voices, where they used to while away the days in sweet playing of **tigi** drums in the brick buildings?' ('The lament for Nibru', ETCSL 2.2.4, lines 82–83). However, the texts do not explain what it was that made the **tigi** drum, its sound, and the playing of it, 'sweet'.

5.2 Idiophones

Idiophones (the clashing, clapping, and shaking instruments) are attested in cultic contexts throughout the ancient Near East (general descriptions and iconography: Hickmann 1949: 2–105; Braun 2002: 88–90, 98–110 with Illus.; Dumbrill 2005: 384–386 with Pl. 78–89; Kolyada 2009: 112–129 with Figs.). With rare exceptions, the sounds and methods of playing of those instruments were redolent of exuberance and light-hearted energy. Thus, and again with rare exceptions, those idiophones are typically attested in connection with occasions of joy and celebration. Some may in addition have had apotropaic uses. They were a group of diverse instruments, diverse both in how they were played (as identified in the three broad categories listed at the beginning of this paragraph) and in the idiosyncrasies of their construction and sound.

5.2.1 Clashing instruments

5.2.1.1 Cymbals

Cymbals were the only clashing instruments in the ancient Near East (descriptions and iconography, mostly unsorted as to context and purpose, in Hickmann 1949: 32–37, items 69251–69256, 69258–69261a, b; 184–5, three pairs of cymbals; Pl. XIX–XXII; Braun 2002: 54, 55, 107–110 with Illus. III.27, III.28; 166, 174–175 with Illus. IV.32e; Dumbrill 2005: 385, Pl. 81–84; Kolyada 2009: 122–126; Smith 2011: 55). The term 'clashing' with regard to musical instruments implies the energetic bringing together of the sound-producing surfaces of two like instruments in such a way that they glanced off each other. It carries with it the idea of 'ringing' and 'resounding' in contrast to the momentary sharp sound of a clap. Cymbals were typically made of bronze or copper, but ceramic cymbals are not entirely beyond the bounds of possibility (§5.1.3, n. 2).

Judging from the iconography, the sizes overall ranged from approximately 3 cm in diameter (perhaps intended as finger cymbals) to around 25 cm in diameter (Braun 2002: 109–110; Smith 2011: 54 with n. 65). A high-pitched ringing sound would have characterised the smallest cymbals.

In Israel/Palestine, cymbals are attested in the biblical narrative at HB 2 Samuel 6.5, 14, which describes a procession with cultic dance. In addition, the text of HB Psalm 150.5 places cymbals in the context of praise of the deity, implying occasions of cultic festivity in general (§2.3.2; §2.4.1). In the wider Levantine context, Braun discusses finds of bronze cymbals excavated from fourteen sites including Bronze Age Megiddo and Acco, and Late Bronze Age Ugarit (Braun 2002: 107–110 with Illus.). That those cymbals were made of bronze (a precious metal at that time) suggests that they were for use in prestigious settings such as the royal court and the cult. Detail from a clay stand with five musicians, from late eleventh- or early tenth-century BCE Ashdod (Braun 2002: 171, Illus. IV.32e), is a witness to the cultic use of cymbals in the Levant in the latter half of the Iron Age.

There is clear evidence from Anatolia that cymbals (taking the term *galgalturi* to mean cymbals; see §5.1.3 above) were employed in temple liturgies and rituals, especially, it seems, in rituals involving royalty (§2.2.2, after n. 11; Moore 2015: 13–32, 77–79; Franklin 2016: Section 6, at n. 26, n. 28). They were also present in the process of divination and prophecy (Brison 2014: 186; Franklin 2016: Section 6, at n. 25). Cymbals were among the instruments used generally by both temple and court musicians, and were also played in other contexts such as processions, dances and weddings (§2.3.3; Brison 2014: 186–187).

Some of the Mesopotamian cymbals were different from the typical Levantine instruments in both size and shape. Although some were small, including several from the third-millennium BCE royal tombs in Ur (e.g. Dumbrill 2005: 385, Pl. 81–84; Kolyada 2009: 124, Figure 4.10), others, from later periods (ninth to eighth century BCE), were approximately 20–25 cm in diameter and tended towards a slightly conical shape (Braun 2002: 109–110, citing Rashid 1984; Kolyada 2009: 123–124, Figures 4.9 and 4.10). The extent to which cymbals were used in the cult is uncertain, but they are known to have been associated with ritual athletics and trials of strength. A text from about 1200 BCE or earlier, found at Assur (the capital of Assyria until about the ninth century BCE), mentions athletics in connection with a temple festival (Sjöberg 1985: 8). A drawing made from a relief in a tomb in Larsa (modern name: Tell as-Senkereh or Sankarah/Sinkara), in what is now southern Iraq, shows two men engaging in a ritual trial of strength while two other men play a small kettledrum and a pair of cymbals respectively (Sjöberg 1985: 9, Figure 5; Dumbrill 2005: 368, Pl. 8).

Most of the evidence for the use of cymbals in ancient Egypt is either of unknown date or comes from much later than the period covered here. Of the excavated remains of 12 pairs of cymbals catalogued by Hickmann, only six pairs are dated, but to Late Roman and Byzantine Egypt.[7] A model of a cymbal

made of faïence, found in Elephantine, is dated to between 664 and 332 BCE, the 'Late Period' of ancient Egyptian history (Hickmann 1949: 37, item 69262), and may therefore be relevant here from the standpoint of chronology as well as provenance. Nevertheless, the item is very small (2.5 cm in diameter, 4.5 cm tall) and has no pair. It was perhaps more likely to have been an ornament (the top of the central dome has a hole for suspension) or a votive object, rather than a musical instrument.[8] Lise Manniche points out that many of her cited references to the use of cymbals in the cult in Egypt are from late antiquity (Manniche 1991: 67). However, she also says that despite the lateness of those references, the use of cymbals is 'firmly rooted in Pharaonic civilisation', being mentioned in Middle Kingdom texts (*c.*2010–*c.*1630 BCE) as being played by the goddesses Isis and Nephthys (Manniche 1991: 67–68). Furthermore, she notes that a relief depicting a funeral procession, which includes 'a woman who is possibly playing cymbals', dates from the Eighteenth Dynasty (*c.*1539–*c.*1292 BCE) (Manniche 1991: 129).[9] Braun (2002: 110), following Hickmann (1961), writes of cymbals preserved from the eighth century BCE. Thus, despite the preponderance of late and chronologically uncertain references to the use of cymbals in ancient Egypt, it is clear that the instruments were known to the Egyptians and used by them in cultic contexts from at least the second millennium BCE.

5.2.2 Clapping instruments

Clapping instruments were of four main types: human hands used as noise makers, paired wooden or ivory clappers, and two types of small hinged wooden clappers (general descriptions and iconography in Hickmann 1949: 1–106; Lawergren 2001: 451, drawings a, c; Braun 2002: 88–90 with Illus. III.10; Schuol 2004: 122–124, 129; Dumbrill 2005: 385, Pl. 85, 86; Kolyada 2009: 115–116). Handclapping is attested in conjunction with processions and cultic dance in Egypt (§2.3.5, after n. 38; §2.4.4, after n. 49), and at funerary rites in Israel/Palestine (Smith 2011: 136–137). Evidence for the latter is late (Smith 2011: 136 n. 3) but the custom is likely to have been ancient.

5.2.2.1 Paired flat clappers

The most frequently attested type of clapping instrument consisted of two thin, flat, wooden or ivory slats which were held one in each hand and smacked together. They were typically slightly curved longitudinally. It was common for them to be decorated to look like human forearms terminating in hands, suggesting that they were conceived of as extensions to the human counterparts (e.g. Manniche 1991: Pl. 15). They had advantages over bare hands in that they could produce a consistently loud sound for long stretches of time without wearying the players. The use of clappers of this type is typically attested in depictions of processions in Egypt. A single ivory example (probably originally one of a pair), dating from around 1200 BCE, is extant from Tel Shikmona near

modern Haifa; it is likely to be a remnant of the Egyptian presence in that region in the early Iron Age. Paired wooden clappers may have been the *ʿatsey berôshiym* 'cypress tree [instruments]' or 'cypress wood [instruments]' referred to in the biblical narrative of the Israelites' removal of the 'ark of God' (HB 2 Samuel 6.3–5), where the context is a procession with cultic dance of David and the Israelites (Kolyada 2009: 115–116; §2.3.2 at n. 34).

5.2.2.2 Hinged clappers

Of the two types of hinged clappers, one consisted of two wooden arms, hinged at one end and held so that the arms could be smacked together. A variant had a static third arm fastened between the two mobile arms. The instrument was played by causing the mobile arms to strike against the static arm, which was facilitated by extending the static arm to form a handle beyond the hinge of the mobile arms.

The other type was the crotal, a kind of small hybrid clashing and clapping instrument that combined the idea of clashing cymbals with the structure of a small hinged clapper. A crotal consisted of two hinged arms with a small cymbal embedded into the interior of the open end of each one. When the arms were brought together the small cymbals produced a ringing sound. Both types of hinged clapper were small and light enough to be held in one hand. They are occasionally depicted in processions and dancing. It is possible that crotals, or one or other variety of hinged clapper described in the preceding paragraph, were the 'cypress tree [instruments]' or 'cypress wood [instruments]' (*ʿatsey berôshiym*) of HB 2 Samuel 6.5 (§2.3.2 at n. 34).

5.2.3 Shaking instruments

The pertinent types of shaking instrument are enclosed rattles, sistrums, bells, and menats. All these were susceptible of cultic use; some were also used in popular non-cultic contexts. It is rarely possible to pinpoint precise areas of cultic use, but information gleaned from archaeological findspots, and provided by iconographic and written sources, is normally sufficient to establish general circumstances of use.

5.2.3.1 Enclosed rattles

Enclosed rattles are attested throughout the Near East in antiquity (Hickmann 1949: 70–75; Braun 2002: 100–107 with Illus. III.18–26; Kolyada 2009: 112–116 with Figures 4.5, 4.6; Helvaci 2018). What might be called the 'standard' type of rattle had a small, hollow earthenware body with or without a handle. Rattles without handles were held either directly round the body of the instrument or by gripping a ring or a tab extruded from the instrument's wall. In some cases, the tab was pierced by a hole. The ring and the pierced tab could receive a string or a ribbon for suspending the

instrument. Inside the body of the instrument were one or more loose pellets (pebbles, nodules of baked clay, dried seeds) which created sound when the rattle was shaken.[10]

There is a possible biblical witness to the ancient Israelite use of rattles of the type just described. The HB at 2 Samuel 6.5 uses the term *menaʿaneʿiym* to identify one of the instruments played in the context of an Israelite procession with dancing. The Hebrew term is reckoned by some to mean an earthenware rattle, or rattles (the Hebrew is plural) (Braun 2002: 19, citing Bayer 1964). Many more or less likely alternative suggestions as to what the term might mean have been put forward, but the only serious alternative to 'earthenware rattle(s)' is 'sistrums', which is consequent on regarding the Hebrew word as a generic term for shaking instruments (Kolyada 2009: 115–116). Modern English translations of the Bible render the Hebrew term variously.

A large number of closed earthenware rattles is extant from the Levant, including many specimens from Israel/Palestine. Their datings span the whole of the period under review. The even distribution and preponderance of finds at ancient cultic sites in Israel/Palestine suggests that earthenware rattles were in general use in cultic contexts throughout the region, and lends support to the idea that the biblical term *menaʿaneʿiym* at HB 2 Samuel 6.5 means earthenware rattles rather than sistrums (see Braun 2002: 100, 106).

Braun identifies six types of enclosed earthenware rattle from Israel/Palestine, based on their shape: animal, bell (closed), bird, fruit (often lemon), human, and spool (Braun 2002: 100–105).[11] Most of those types were common throughout the Near East in antiquity. One that was not was the spool-shaped rattle, which seems to have been unique to Israel/Palestine. Its salient characteristic was a shallow indentation, or in some cases two or three parallel shallow indentations, round the circumference of the body, where the player's thumb and fingers would hold the instrument. One of Braun's illustrations of such rattles shows the addition of an earthenware ring extruded from the body and placed over one of the longitudinal indentations. The ring seems to be a guide through which a finger could pass (Braun 2002: 102, Illus. III.20).

Among the finds from ancient Anatolia and Mesopotamia are many rattles of types similar to those of the Levantine specimens. Examples of fruit-shaped earthenware rattles were excavated in Acemhöyük in central Anatolia and in the Hacilar region of southwestern Anatolia. One specimen is notable for dating apparently to the sixth millennium BCE.

Examples from Mesopotamia include five zoomorphic rattles. Three of them (two animal-shaped, one bird-shaped) date from *c.*2000–*c.*1550 BCE, the Old Babylonian period (Kolyada 2009: 114, Figure 4.6). The two remaining examples are bird-shaped and date perhaps from the third millennium BCE.

Rattles in different forms are also extant, for example an egg-shaped rattle, with a handle, from Kültepe, central Anatolia, dating to around 2200 BCE (*Hürriyet Daily News*, 18 August 2014), and a pie-shaped rattle from late third-millennium Mesopotamia now housed in the museum of the Wolverhampton Arts and Museums Service, Wolverhampton, UK.

Our knowledge of enclosed rattles in ancient Egypt is dependent on a relatively small number of extant archaeological finds; there seems to be no pertinent iconographic or written information from antiquity. The remains of 18 rattles are catalogued by Hickmann (1949: 70–75, items 69711–69724 and 11504).[12] Most of them are of unknown provenance or date or both, or are very late in relation to the present period. However, eight of those items, belonging among the earthenware rattles in the category 'rattles without handles', are dated to before the end of the present period and have their provenances specified. Between them they represent two periods, four places, and the shapes animal, egg, and fruit (Table 5.1); a bird-shaped rattle from Giza, of unknown date, is also catalogued among the earthenware rattles without handles (Table 5.1, final entry).

Table 5.1 Ancient Egyptian earthenware enclosed rattles without handles, catalogued by Hickmann (1949)

Shape	*Details of shape*	*Item No. in source*	*Plate No. in source*	*Date*	*Location of find*
Animal	seated cat(?)	69717	XLI, *C*	unknown	Saqqara
	head of goat or gazelle	69718	XLII, *A*	Eighteenth Dynasty	Amarna
	hedgehog	69719	XLII, *B* & *C*	unknown	Giza, plateau of pyramids
	hedgehog	69720	XLII, *B* & *C*	unknown	unknown
	reclining antelope/ ibex(?)	69723	XLI, *C*; XLII, *A*	Eighteenth Dynasty	Amarna
Fruit	lemon (with extruded pierced suspension tab)	69724a	XLIII, *C*	Prehistoric	el-Mahasna*
	lemon (with extruded pierced suspension tab)	69724b	XLIII, *C*	Prehistoric	el-Mahasna*
	lemon (with extruded pierced suspension tab)	69724c	XLIII, *C*	Prehistoric	el-Mahasna*
	lemon (with extruded pierced suspension tab)	11504	XLIII, *B*	Prehistoric	Sahel el-Baghlieh†
Egg	crocodile egg	69721	XLIII, *A*	Prehistoric	Merimde**
	pigeon egg (proportions)	69722	XLIII, *A*	Prehistoric	Merimde**
Bird	body and head, without feet, without wings	69716	XLII, *B* & *C*	unknown	Giza

Location of finds: * west bank of the Nile, Middle Egypt. † east bank of the Nile, near Badari, Upper Egypt. ** in the west Nile delta, Lower Egypt. Dating of finds: Eighteenth Dynasty = *c.*1539–*c.*1292 BCE; Prehistoric (Hickmann's 'Époque préhistorique') = prior to *c.*3000 BCE).
Source: Hickmann (1949: 72–75, items 69716–69724 and 11504, ordered according to rattle shape).

Six enclosed rattles with handles are catalogued by Hickmann (1949: 70–72, items 69711–69715). Their relevance in the present context is uncertain. In the case of only one item are both date (Roman period) and provenance (Oumel el-Bareigat/Umm al-Bareigat) known; the remainder are of unknown date, and one of those is also of unknown provenance. Nevertheless, those rattles are worthy of note not only for their shape (each has a more or less distaff shape consisting of a bulbous hollow body with a protruding handle) but more especially for the materials from which they are made: papyrus, reeds, rushes, and straw (Table 5.2). The use of fibrous plant material would inevitably engender sounds much quieter than those produced by earthenware rattles. While rattles made of plant material would likely have been no less robust in

Table 5.2 Ancient Egyptian grass rattles with handles, catalogued by Hickmann (1949)

Material	*Shape*	*Item No. in source*	*Plate No. in source*	*Date*	*Location of find*
plaited rushes and stalks of reed	distaff	69711a	XL, *A*	unknown	Saqqara
plaited rushes and stalks of reed	distaff	69711b	XL, *A*	unknown	Saqqara
reed; rattle is made from single stalk of reed	distaff	69712	XL, *B*	unknown	Saqqara
straw; body damaged; rattling element no longer present	distaff; body has square cross-section	69713	XL, *B*	unknown	near Meir*
rushes for body; a stalk of reed for handle	distaff	69714	XL, *A*	Roman period†	Oumel el-Bareigat**
an egg wrapped in linen and held in a bundle of papyrus stalks which are also twisted together to make the handle; fragments of solidified egg yolk (perhaps the original rattling element); very poor state of preservation	distaff	69715	XLI, *A* & *B*	unknown	unknown

* Upper Egypt, west bank of the Nile † Roman period = 32 BCE–476 CE. ** Upper Egypt; also known as Umm al-Bareigat.
Source: Hickmann (1949: 70–72, items 69711–9769715).

use than their earthenware counterparts, their quieter sound suggests that they may not have been used in the more populous and energetic ritual activities. It is possible that their use in the cult was confined to calm rituals involving few people. While this is speculation, Hickmann himself raised the question of liturgical use with regard to the rattle catalogued as item 69715, noting first that 'This curious object does not look as if it has a musical purpose', and going on to suggest that 'It may have had a place in the performance of certain rites' (Hickmann 1949: 72).[13] It is possible that the rattle was a votive object, a possibility which could also apply to the remaining five rattles in the group.

5.2.3.2 Sistrums

The sistrum was a shaking instrument in which the noise-producing elements were not enclosed; it was thus basically an open rattle (Hickmann 1949: 76–105; Braun 2002: 88–91, 99, including Illus. III.8, III.9, III.11; Dumbrill 2005: 34, Pl. 6; 386, Pl. 88; Kolyada 2009: 112–113 with Figures 4.3 and 4.4; 140 with Figure 5.1; 148–149; Gabbay 2010: 28, Figure 4). Archaeological and iconographic evidence from the ancient Near East shows that the instrument consisted typically of small metal jingles hung loosely on pins or strings suspended parallel to each other between two opposite sides of an open frame. The frame was attached to or emerged from one end of a handle in the same plane. A sistrum could be made of wood or metal or a combination. When it was shaken the colliding metal jingles produced sound.

The sistrum frames were sometimes U- or V-shaped. A crossbar might link the open ends of the 'U' or 'V', forming a lintel, as it were, which provided a place for ornamentation or an inscription. However, the most frequently attested shapes are the rectangle (giving the instrument a so-called 'naos' shape) and the inverted U (giving the instrument a characteristic arch shape). The latter was formed from a single strip of metal bent into a tight U, its two ends fastened to the handle. An unusual and seldom attested variety of sistrum had no frame. Instead, strong pins or prongs with jingles threaded onto them emerged directly from the handle, forming a 'Y' shape; if there were several pins, they were splayed (e.g. Kolyada 2009: 140, Figure 5.1; Gabbay 2010: 28, Figure 3[?]).

Sistrums are attested for ancient Israel/Palestine by the plural Hebrew term *shalishiym* which designates one of the types of instrument played by women as they danced to welcome home victorious Israelite warriors (HB 1 Samuel 18.6). A wide range of interpretations of the term has been put forward during the course of the last two millennia. Yelena Kolyada concludes her review of many of them (Kolyada 2009: 138–140) by confirming her opening statement that the *shalishiym* was 'probably an ancient Jewish idiophone of the sistrum type, a variety of *menaʿaneʿiym*' (Kolyada 2009: 138). This reflects the present consensus. It fits etymologically with the Egyptian term *sesheshet* which by its association with iconography designates a sistrum of one or other of the typical

shapes described above, and it fits onomatopoeically. Furthermore, the plural form of the word may relate to the plurality of jingles as much as to a plurality of instruments. The presence of sistrums in the wider Levant and Sinai in the period around 1200 BCE and later is attested by Braun's (2002) Illus. III.8, III.9, and III.11. They witness to a considerable Egyptian presence in those areas, which could be an indication that the use of sistrums in the Levant was influenced by Egyptian practice.

In Anatolia, sistrums are attested from the third millennium BCE (Early Bronze Age) onwards. There are relatively few archaeological finds, all of which are from central Anatolia. Nevertheless, their association with cultic rites is strongly suggested by ornamentation in the form of birds and bulls, which had symbolic significance in Anatolian religion (Helvaci 2018).

Evidence for the presence and use of sistrums in ancient Mesopotamia is meagre. No known archaeological remains of sistrums have so far been discovered in the region, and the ancient iconographic evidence is minimal (Gabbay 2010: 23; compare RAVA: 'Sistrum'). In addition, there is no extant description of a sistrum, and no known terminology which can be understood to refer unequivocally to that instrument in either Sumerian or Akkadian texts.[14] In a conference paper delivered in 2008 and published in 2010, Uri Gabbay attempted to show that one or other of the Sumerian terms **šem** and **meze** and their Akkadian equivalents *ḫalḫallatu* and *manzû*, respectively, might refer to the sistrum (Gabbay 2010). However, the attempt was unsuccessful (Smith 2019). The Mesopotamian sistrum remains without written attestation and with only a single iconographic attestation in an impression from a Seleucid period stamp seal (Gabbay 2010: 23, item 4; 28, Figure 4) which lies outside the present chronological frame of reference.

The most plentiful attestations of sistrums in Near Eastern antiquity are provided by sources from Egypt. Archaeological remains are many. Hickmann (1949: 76–103) catalogues 18 whole items and 45 fragments (mostly handles and fragments of handles). Of the whole items, ten are arch-shaped (items 69302–69305, 69313–69318), seven are naos-shaped (items 69320–69326), and one is of indeterminate shape (item 69301). Iconographic sources are also abundant; images of many of them have become widely distributed in drawings and photographs in books and on the Internet. Arch-shaped and naos-shaped sistrums predominate in both archaeological and iconographic sources. Both forms of sistrum were termed *sesheshet* (*sššt*) prior to the Late Period (664–332 BCE); from the Late Period onwards the arch-shaped sistrum was termed *sekhem* (*sḫm*) (Vassilika 1989: 108–109).

In ancient Egypt the sistrum was used in sacred rites and was regarded as a sacred instrument. The arch-shaped sistrum was one of the emblems of the goddess Bastet, but it was especially sacred to the worship of the goddess Hathor being used as both a musical instrument and a votive offering in rites celebrating her (Vassilika 1989: 109). Hence many extant specimens carry images of Hathor, characterised by a full-frontal view of a female face framed on each side by shoulder-length hair turned up at the bottom.

5.2.3.3 Bells

The penultimate type of idiophone to be considered here is the bell. Since the beginning of the second decade of the twenty-first century, valuable research has increased our awareness of the importance of bells in both cultic and non-cultic contexts in the cultures of Mediterranean and Near Eastern antiquity (e.g. Castelluccia and Dan 2014; Hussein 2016; see also RAVA: 'Glocke'). Recent and earlier excavations have revealed that the bells of antiquity were not large by modern standards, ranging from open-sided spherical pods approximately 1 cm in diameter to open-bottomed domed artefacts approximately 12 cm tall, similar to modern cowbells. Bells were used for signalling of various kinds, and for apotropaic purposes. They could be held between the thumb and forefinger of the hand, suspended from cords, rods or bars, singly or in groups or a group, worn as ornaments, or be attached to belts or garments. Of all the idiophones discussed in the present context, bells exhibited perhaps the greatest variety of shapes, sizes, and designs, as will be apparent from the iconographic material presented and referred to below.

For present purposes, a bell may be broadly defined as a thin-walled metal vessel (most usually of bronze) with an internal, and in most cases captive, metal clapper (Castelluccia and Dan 2014: 67) or without a clapper but intended to be struck externally.[15] Sound is created when the wall of the vessel is struck either by the clapper, or from outside. The resultant sound is a characteristic ringing. A prerequisite is that the sonorous property of the wall of the vessel is not dampened by being held in the fist. Typically, an eyelet is extruded from the wall of the bell, or a ring is attached externally, to facilitate holding or suspension. The most common shape for a bell resembled that of an inverted drinking cup. Exceptions to the broad definition are occasionally met with. There were bells made of faïence, small enclosed bells with patterned openings in the sides in the manner of jingle bells (sleigh bells), and the so-called 'open cage bells', which were larger than jingle bells and had wider slits. In jingle bells and open cage bells the clappers were sometimes free pellets of metal or stone, constrained only by the walls of the vessels and the narrowness of the slits.

The cultic use of bells in ancient Israel/Palestine is attested principally by written evidence in the HB (Braun 2002: 24–25, 195 with Illus. V.8; Kolyada 2009: 118–122). The pertinent texts are from among prescriptions for the attire of the high priest when he officiated in the Jerusalem Temple. They stipulate that golden bells shall alternate with embroidered pomegranates on the hem round the bottom of the high priest's robe (HB Exodus 28.33–34; 39.25–26; additional references at HB Zechariah 14.20; 45.9). The word used for the bells is *paʿamon/paʿamoniym/paʿamoney*: 'bell'/'bells'/'bells [made] of'. Kolyada, who focuses on the etymology of the Hebrew term and the history of its translation, notes that while there are differing views about the significance of *paʿamon/paʿamoniym*, the present consensus is that it means 'little bells' (Kolyada 2009: 120). The earliest archaeological find of bells in

ancient Israel/Palestine is of specimens from Jerusalem, dating to the ninth and eighth centuries BCE, which apparently have fragments of cloth attached (Braun 2002: 195; Kolyada 2009: 118).

The 'little bells' of the HB were not merely ornaments. Their sound, in addition to being generally apotropaic and prophylactic, fulfilled two functions in the temple. First and foremost it alerted the deity to the presence of the high priest when he performed his legitimate service in the most sacred room. This warned the deity to make himself invisible to the high priest so that there was no risk that the high priest might see the deity and die as a consequence. Second, the sound of the little bells was an audible sign to worshippers that the high priest in the most holy room was performing his service with the deity's approval, and had not suffered death.

Material attesting to the cultic use of bells in the wider Levant is scarce. Braun notes isolated evidence for the use of small bells as appurtenances to the clothing of cultic and government officials from Assyria in the fifteenth century BCE and from Hierapolis/Bambyce (modern name: Manbij, northwest Syria) in late antiquity (Braun 2002: 24–25). Apart from this, the bulk of the surviving archaeological and iconographic evidence relating to the wider Levant is very late in relation to the period surveyed here, coming from the Hellenistic–Roman period and later (Braun 2002: 197–202 with Illus. V.1–V.11).

Bells from ancient Anatolia, particularly from its eastward reach into Urartu, are well attested by archaeological finds (Castelluccia and Dan 2014, frequently citing other scholars). Most of the excavated remains date to the ninth and eighth centuries BCE but there are isolated remains which are earlier (fourteenth and thirteenth centuries BCE) and later (seventh century BCE). The geographical area covered by Castelluccia and Dan's study (Castelluccia and Dan 2014, noted above) encompasses the modern regions of eastern Turkey, the Caucasus (southern Chechnya, Georgia, northern Azerbaijan), Armenia, and northwestern Iran. However, in the present book the focus is primarily on eastern Turkey, Armenia and southern Transcaucasia (southern Georgia and southwestern Azerbaijan) in order to limit the discussion to the ancient Near East. Those areas are roughly the present-day extent of the ancient and now long-vanished kingdom of Urartu, and are represented in Castelluccia and Dan's study (Castelluccia and Dan 2014) by most of the discussions and illustrations on pages 93–100 there.[16]

The majority of finds of bells are from burial grounds and isolated graves and may be presumed to belong to the deposited grave goods. The relevance of the bells to the cult is not always readily apparent except insofar as their deposition alongside human remains could imply belief in an afterlife, and that accordingly the bells were placed with the remains in order to ease the passage of the deceased from life to afterlife. The apotropaic properties supposedly inherent in the sound of the bells would have facilitated this symbolically, as ideophony (compare §4.3.2, end).

Typical for Urartian bells was an octagonal cross section, with a domed top surmounted by a suspension loop or ring. Internally there was a suspended clapper. The body had two or three latitudinal ribs at intervals on the outside

(perhaps marking or resulting from structural changes) and was perforated by upright diagonal holes or slits. The material was most usually bronze or bronze and iron. Those features are exemplified by an item housed in the Metropolitan Museum of Art, New York, accession number 1977.186. This bell is 8.71 cm tall and carries the inscription 'From the arsenal of Argishti' (most likely King Argishti I of Urartu, reigned *c.*789–*c.*766 BCE).[17]

Urartian bells exhibiting variants of the typical features described above, as well as certain very different features, are also extant from antiquity. Items in two groups of archaeological finds will serve as examples here.

One of the groups is centred on the city of Yerevan (the capital of present-day Armenia) and includes items from Yerevan itself, from Karmir Blur in the city's southwestern outskirts,[18] and from Oshakan, about 20 km northwest of the city (Castelluccia and Dan 2014: 93–96 with Figures 37–40). Two bells (one damaged) found in the columbarium in Yerevan, and reckoned to date from the eighth century BCE, have a domed shape with suspension ring but have a circular or slightly oval cross section. They are 8 and 9 cm tall, respectively (Castelluccia and Dan 2014: 96 and Figure 40). Eight items from Karmir Blur exemplify varieties of the basic domed design with suspension rings (Castelluccia and Dan 2014: 93 and Figure 37). Three have the characteristic octagonal cross section (in the remainder the cross section is circular or slightly oval) with an externally ribbed body perforated by rectangular holes. Two are without ribbing and holes in the body; one of these is noteworthy for its inverted conical shape, the other for its bulbous conical construction and a suspension loop which spans the diameter of the dome, giving the bell the appearance of a modern cowbell. One of the octagonal bells has an inscription mentioning the Urartian king Sarduri II (reigned *c.*764–*c.*735 BCE; Castelluccia and Dan 2014: 93–94 and Figure 37A). An additional item from Karmir Blur is an 'open cage' bell (Castelluccia and Dan 2014: 95 with Figure 39), representing a type of bell completely different from the bells described immediately above. The bell is small, spherical, and with a suspension ring at the top. The 'bars of the cage', as it were, consist of one central latitudinal narrow band and four longitudinal narrow bands which meet at the top and the bottom. A free pellet inside the 'cage' produces a ringing sound when the bell is agitated. A single bell from a burial mound within a circle of megaliths in Oshakan has a regular conical form with a circular cross section and a suspension loop at the top (Castelluccia and Dan 2014: 95 with Figure 38).[19] The item is otherwise plain, with no external ribbing and no holes in the body. The sides of the body are perfectly straight. The bell is approximately 3.5 cm high.

The other group of Urartian bells comes from the vicinity of Lake Van in what today is the extreme east of Turkey. Three locations are relevant: the city of Van (also, especially formerly, known as Tushpa) on the eastern shore of Lake Van; Dizginkale, approximately 25 km due north of Lake Van; and Patnos, approximately 50 km due north of Lake Van (Castelluccia and Dan 2014: 98–99 with Figure 43). From the outskirts of Van comes a regularly conical bell 8.8 cm high and plain except for a narrow band round the bottom

which has an inscription mentioning the Urartian king Argishti II (reigned *c.*714–*c.*680 BCE; Castelluccia and Dan 2014: Figure 43C). Two bells with the typical octagonal cross section and rectangular holes in the body were found in a necropolis near Dizginkale. One, now in a damaged state, is 9.8 cm high and has an inscription mentioning the Urartian king Menua/Minua (reigned *c.*810–*c.*786 BCE) which features an engraving of the head of a bull (Castelluccia and Dan 2014: Figure 43A). The other octagonal bell is 9.0 cm high and has an inscription mentioning King Argishti I (reigned *c.*789–*c.*766 BCE) which also features an engraving of a bull's head (Castelluccia and Dan 2014: Figure 43B). The bull's head in the engravings is perhaps a royal emblem or an indication of the animal for which those bells were made (Castelluccia and Dan 2014: 98). A necropolis near Patnos has yielded yet another octagonal bell with rectangular holes, approximately 8.0 cm high and with the clapper preserved (Castelluccia and Dan 2014: Figure 43D).

The existence of bells in ancient Mesopotamia has been known from at least as early as Austen H. Layard's second archaeological expedition to the region in 1849–1851, and his subsequent written account of it (Layard 1853a, 1853b).[20] In his account, Layard reports a find of some 80 small bronze bells in a chamber in 'Nimroud' (Layard 1853a: 177; 1853b: 149–150).[21] The bells range in height from 4.45 cm to 8.26 cm (1¾ inches to 3¼ inches). Layard illustrates four of them in the work just named (p. 177 in the British edition, p. 150 in the American).

Those four bells strongly resemble many of the Urartian bells discussed above, even though none is octagonal. Their shape is gently conical and domed at the top, with an extruded loop for suspension. Three have a clearly visible hole at the top of the dome, beneath the loop, from which a clapper could be hung inside the instrument. One of the bells is noteworthy for its latitudinal ribbing and its narrow rectangular vertical slit.

More recent archaeological excavations in Nimrud have added little to the repertory of Mesopotamian bells. Iraqi excavations in the Queens' Tombs and other rooms in the ruins of the Northwest Palace of Ashurnasirpal II (king of Assyria from 883 to 859 BCE), undertaken in 1985–1993 and 2001–2002, have produced only five finds of bells (Hussein 2016).[22] Most of the bells in those finds are very small; in three finds, they are clustered components in items of jewellery (herein n. 22, (a), (b), (c)), and in another find a single minute bell is embedded in a stamp seal (n. 22, (e)). All the bells in those four finds are made of gold and exhibit impeccable workmanship. Their opulence, craftsmanship, and implied circumstances of use are redolent of the non-cultic side of courtly life, the day-to-day business and pleasure of the land's highest elite.

However, the one remaining find (n. 22 (d)) gives a different impression. It comes from Coffin 3, one of three bronze coffins located in Tomb III, and comprises, in addition to other grave goods, two small copper or bronze bells of conventional inverted drinking cup shape. One has a slightly inverted conical body, open at the bottom and domed at the top. There is a hole in the centre of the dome, allowing for the suspension of a clapper. As it stands, the bell lacks

a suspension loop, but there are clear marks opposite each other on the shoulders of the dome showing where the suspension loop has broken off. The height of the extant object is 4.2 cm. The other bell is intact, with a domed, slightly conical body, and a gently flared bottom rim. The dome is surmounted by a suspension ring. The wall of the body is perforated by what originally may have been a rectangular hole, but which is now too worn for certainty. The overall height of the object is 5.0 cm. The proportions of the body of this bell are noticeably smaller than those of its partner.

It is clear from their size, shape, and material that the two copper/bronze bells just described were not items of jewellery or ornaments. Furthermore, it is clear from the other grave goods in Coffin 3 that this was not the burial place of royalty, although the deceased (there are skeletons of two females, two males, and one possible male) were people of fairly high standing (Hussein 2016: 38–42). In this light, and given the somewhat utilitarian character of the two bells, it is reasonable to suppose that those particular bells had been placed in the coffin not only for their symbolic apotropaic value but also because they had been part of the accoutrements of one of the deceased who may have had his or her employment if not in royal and courtly affairs, then perhaps in cultic ones. It is also a reasonable supposition that those two plain bells had been the regular equipment of a cultic officer (a priest, a priestess, a diviner, a singer) here interred.

Aside from the relatively recent finds of bells in the Queens' Tombs, Layard's report of his own voluminous find in Nimrud in the late 1840s and early 1850s has remained a valued source of information about ancient Mesopotamian bells even down to the present time, being cited by, for example, Carl Engel (1864: 64–65) who quoted a relevant passage and reproduced Layard's illustrations, and more recently by Castelluccia and Dan (2014: 68) who cite Layard indirectly via (Engel 1864).[23] Castelluccia and Dan also remark that the majority of bell finds from northern Mesopotamia are from Nimrud (Castelluccia and Dan 2014: 68). Indeed, there have been no large finds of bells registered anywhere else in Mesopotamia. However, a bell is extant from mid first-millennium BCE Babylonia, which is said to be an incantation bell (Galpin 1937: 8 and Pl. III.9) and thus has an obvious cultic connection. Many incantation texts are extant from Mesopotamia in the second and first millennia BCE. Most noteworthy is a series of incantations and rituals for protection from the malevolent mythological she-monster Lamaštu (Farber 2014). The sound of bells would be highly appropriate as rituals progressed and incantations were recited.

Evidence for the presence of bells in ancient Egypt is plentiful but probably late. Hickmann's catalogue of musical instruments in the Cairo Museum and instruments that had recently been transferred from there to the Coptic Museum describes 108 items containing bells and bell related artefacts (Hickmann 1949: 37–68, 185–189). Four items are bells made of faïence, possibly votive objects Hickmann 1949: 65–66), and seven are plaster and terracotta moulds (whole specimens and fragments) for bells (Hickmann 1949: 66–68). The remaining 97 items consist of whole and partial specimens of metal bells: bronze in 81 items, brass in 11, gold in four, and silver in one item (Hickmann 1949: 40–65).

Four items in Hickmann's catalogue (Hickmann 1949) have multiple small bells. In one of them (69285), three small conical bells are made of gold, without clappers, and suspended – along with other ornaments – from a necklace. The necklace may have belonged to royalty (compare some of the finds from Nimrud described above). Two further items (69552, 69553) consist of eight and ten small bronze hemispheres, respectively. In each item the hemispheres are without clappers and attached to a horse harness. The fourth item (69570; Pl. XXXI, A, B) consists of ten small bronze hemispherical bells, four of which are without clappers, suspended from a twisted thread.

Hickmann (1949: 39, Figure 12) provides a sketch of the five most typical shapes of bells with a cylindrical cross section, which he catalogued. All the shapes are variants of the 'inverted drinking cup' form well attested in most of the rest of the ancient Near East. The five bells may be described as: (1) skullcap or inverted bowl; (2) conical without rim; (3) conical with rim; (4) small cylindrical without rim (rounded shoulder, slightly flared open bottom); and (5) large cylindrical with rim (rounded shoulder, slightly flared rim), respectively (freely rendered after Hickmann's caption to his sketch).

However, Hickmann also notes specimens with an oval cross section, and three specimens with a square cross section and four flat sides formed as a pyramid (items 69271, 69272, 69551). The square cross section is also reflected in some of the moulds for bells.

An unusual feature of Hickmann's catalogue is his transcription of the pitches of 33 bells in musical notation (Hickmann 1949: 68, Figure 28). Overall the pitches range from G3 to B-flat5.[24] However, the notes C4, C-sharp5 to F5, and G5 are not represented; there is thus a gap between C5 and F-sharp5 in the coverage of the range of pitches. As would be expected, the bells sounding the pitches F-sharp5 and above are the smallest bells. Such small bells are most likely to have been used as ornaments or adornments on clothing and therefore (with the exception of perhaps the bells at the hem of the Israelite high priest's robe of office) least likely to have been employed in the cult. This applies to seven of the 33 bells for which Hickmann provides pitches.[25] More will be said in Chapter 6 about possible implications of the 'sound gap' between the ranges of the seven highest-pitched bells and the remainder.

The few items that can be dated are all late, ranging from the Late Period to the sixth century CE. This is roughly contemporaneous with the bulk of the Levantine evidence (see second paragraph in this subsection), and begs questions about the mutual influence of a possible late addition to the range of cultic instruments in Egypt and the Levant.

5.2.3.4 The menat

The last remaining idiophone to be discussed here is the menat (occasionally transcribed 'menit', which is closer to *mnj.t*, the transliteration of the ancient Egyptian term). The menat seems to have been unique to ancient Egypt where

it is attested in connection with processions into and within temples. It was essentially a heavy necklace consisting of two component parts. One was a set of multiple strings of dozens of very small beads, the other was an amulet made of faïence, metal, or stone. The strings of beads hung at the front of the wearer's neck. At the back of the necklace the strings were brought together and fastened to the amulet which hung down the back of the wearer's neck and was of sufficient size and weight to counterbalance the weight of the beads at the front of the necklace. The amulet could be engraved with text or images pertinent to the context in which the menat was worn.

When removed from round the wearer's neck, the menat could be held by its counterpoise and shaken like a rattle or moved slowly this way and that, producing a compact, high-pitched swishing sound – almost hissing – as the multitude of small beads collided with each other (Manniche 1991: 64, Figure 37). Whether the menat may be legitimately classed as a musical instrument is an open question although there is no doubt that it was used to produce sound. Its unique sound, which would have been especially impressive in the resonant acoustic of a large enclosed stone space, may have been intended to ward off evil spirits and to signal the approach of sacred objects or persons.

The menat was associated particularly, although not exclusively, with priestesses of the goddess Hathor and was part of their official attire. Like the sistrum, it was used as both an instrument and a votive offering (Vassilika 1989: 109).

Notes

1 The specimen catalogued by Hickmann (1949: 110 and Plate LXXIX) is unusually large, measuring overall 73.5×39.9 cm. The frame is of wood, with mortise joints at the corners. There are two membranes, both of parchment. Provenance: Sheikh ʿAbd el-Qurnah, Eighteenth Dynasty, reign of Thutmose III (*c.*1479–*c.*1425 BCE). This specimen is also referred to in Manniche 1975: 5 with n. 46.

2 Dumbrill takes issue with a reference to '*gis galgaturi sagir*, a galgaturi [*sic*] made of fired clay', remarking that this is 'hardly a suitable material for cymbals' (Dumbrill 2005: 410). He does not identify the source of the reference, and I have been unable to trace it. The suitability of fired clay as a material for cymbals depends on several factors, but principally on the size of the cymbals and the way they are played. Energetic clashing would be likely to cause breakage; however, the material would tolerate gentle clashing or striking. A small, expertly fired, fine clay, shallow, saucer-shaped cymbal, radially symmetrical and with fairly thin sides, would probably be able to produce a clear but subdued ringing sound when struck gently. A larger such cymbal would produce a deeper sound.

3 The name of the **sim** drum is paired with that of the **ala** (**á-lá**) drum in the Ur-Nammu and Gudea stelae (where it is written **si-im**) and is thought by some to have denoted cymbals. See Mirelman 2010; Franklin 2013: n. 32, end. The Ur-Nammu stela and its associated fragments, housed in the University of Pennsylvania Museum of Archaeology and Anthropology, are catalogued in Canby 2001/2006.

4 Compare Shehata 2014: 123: 'The word "**balaĝ**" therefore did not refer to a special instrument with a specific shape and sound, but rather to a concept describing transcendental communication by means of musical instruments.'

5 References to beating drums in cultic contexts include: (a) 'The **pashesh** priests beat the drum skins' ('The Kesh temple hymn', ETCSL 4.80.2, line 114; §2.2.3); (b) 'a

mashmashu-priest shall beat the kettledrum inside the temple' (ANET: 333; §2.2.3); (c) 'She [Nanna] beats the holy **ub** drum at her chest' ('The lament for Urim', ETCSL 2.2.2, line 300; §2.6.3); and (d) 'Beating (?) holy **balaĝ** and holy **lilis** drums for her [Inana], they parade before her, holy Inana' ('A **šir-namursaĝa** to Ninsiana for Iddin-Dagan' [Iddin-Dagan A], ETCSL 2.5.3.1, lines 41–42; §2.2.3).

6 Dr Sam Mirelman has pointed out in a private communication that the drawing in RAVA, 'Trommel and Pauke', 142, Figure 1, shows a drumstick, whereas in the original from which the drawing was made, there is no drumstick.

7 Hickmann 1949: 35–37, items 69258–69260; Plates XIX–XXII; 184–185 (three pairs of cymbals transferred to the Coptic Museum). The terms 'Late Roman Egypt' and 'Byzantine Egypt' are used today to define with greater precision what used to be known as the 'Coptic period' (Hickmann's 'période copte'). They refer to two consecutive periods in Egyptian history: the third to fourth centuries CE and the fourth to seventh centuries CE, respectively.

8 On the general assumption that instruments made of faïence were models made for votive purposes, and on some noteworthy exceptions, see Hickmann 1949: Préface, p. I.

9 Note that Manniche 1975 does not discuss idiophones.

10 Braun 2002: 104, Illustration III.25, presents both a photograph and an X-ray image of a bell-shaped earthenware rattle. The X-ray image clearly shows two pellets (one nodular, the other elongated) inside the instrument.

11 Braun also notes the artistic autochthony of the rattles extant from ancient Israel/Palestine (Braun 2002: 105–106).

12 Hickmann's (1949) item 69711 comprises two rattles; his item 69724 comprises three rattles.

13 'Ce curieux objet n'a pas, d'après son aspect, une signification musicale. … Il a peut-être servi à l'accomplissement de certains rites' (Hickmann 1949: 72). The English translation given in the text is mine.

14 Judith Swaddling's remarks that in ancient Mesopotamia 'Y-shaped sistra seem to have been very common, and we hear of them being used in their hundreds as part of religious festivals' (Kolyada 2009: 37) are based on older scholarship: she cites Galpin 1929. The remarks would be valid if it could be shown that there are Sumerian/Akkadian terms which mean or imply sistrums. At present this is not possible: see further in the present paragraph.

15 A metal vessel without a clapper, but which is intended to be struck from outside, may also, technically, be classified as a bell (von Hornbostel and Sachs 1914, rev. MIMO [2011]: 5, items 111.242.1–111.242.223). However, the instruments discussed here are so small as to make external striking unlikely.

16 The exceptions are discussions of two sets of finds from Alishar and Bastam, respectively, in northern Iran, and their accompanying illustrations (Castelluccia and Dan 2014: 96–98 with Figures 41 and 42). However, two of the three bells from Alishar display typical Urartian characteristics (Castelluccia and Dan 2014:, 96–97 with Figures 41A, B), one of which (Figure 41A) is inscribed with a text of Argishti I, king of Urartu *c.*789–*c.*766 BCE (see also below).

17 Additional object information supplied with the image by the Metropolitan Museum of Art, New York, at www.metmuseum.org/art/collection/search/326225.

18 Karmir Blur was a large fortress founded during the reign of Rusa II, king of Urartu *c.* 680–639 BCE. Items found there bearing inscriptions to persons who lived earlier than the reign of Rusa II may have originated elsewhere, perhaps the nearby fortress of Erebuni founded by Urartian King Argishti I in 782 BCE. See Castelluccia and Dan 2014: 95.

19 '[A] burial mound within a circle of megaliths': the authors designate the location as 'a cromlech kurgan'. For kurgan culture pertinent to the region encompassed by the present discussion, see Kushnareva 1997: 81–150 with map on p. 86.

20 Layard 1853 was first published in two volumes in Britain and America simultaneously. The American edition has different pagination from the British (see References). Both sets of pagination are given here.

21 It seems that Layard believed – erroneously – that 'Nimroud' (Nimrud) was a part of, or another name for, Nineveh. Nimrud, in fact, is located approximately 37 km (23 miles) southeast of Nineveh. The ancient name for Nimrud is Kalḫu (HB *klḥ* = Kalaḥ/Calah, Genesis 10.11, 12).

22 The five finds of bells are identified in Hussein's Catalogue (Hussein 2016: 58–186) at the following pages and with the following ND ('Nimrud') numbers (corresponding plate numbers are also given here for reference): (a) p. 60, ND 1988.13, Pl. 16e–f; (b) p. 97, ND 1989.137, Pl. 62b; (c) p. 97, ND 1989.139, Pl. 78c; (d) p. 156, ND 1989.506[a,b], Pl. 165b; (e) p. 165, ND 1992.14, Pl. 192e.

23 Castelluccia and Dan 2014: 68 mistakenly give 150 as the page reference when citing Engel 1864. It should read '64–65' as given in the text above.

24 Pitches are notated here according to scientific pitch notation (Young 1939), sometimes also known as international pitch notation. In this system, pitches are identified by their musical letter names in a heptachord span of consecutive diatonic pitches beginning on C and ascending to the B above. Nine consecutive ascending heptachords, numbered 0 to 8, respectively, are recognised. Heptachord 0 is the lowest, its C sounding one octave below the lowest C on a standard piano. Its component pitches are designated C0, D0, E0, and so on consecutively up to B0. So begins the next heptachord with C1, D1, E1, and so on. The heptachord beginning with C4 is that beginning on the note represented in staff notation by the first ledger line below the treble stave, 'middle' C. The heptachords relevant to the present context are 3, 4, and 5. Sharps, flats and symbols for microtones are added to the alphabetic pitch names as required, e.g. C-sharp4 (= 'middle' C-sharp).

25 The seven bells with pitches F-sharp5 and above in Hickmann 1949: 68, Figure 28, have the following item numbers in the Catalogue, each given here with the overall height in centimetres (including suspension loop or handle) and, after a solidus (/), the height of the body alone (where known) in centimetres: 69283, 2.3/1.5; 69277, 4.2/?; 69295, 9.1/3.2; 7158, 3.3/?; 69281, 3.5/1.8; 69280, 3.3/?; 69594, 5.8/3.9. Note that for item 7158 the overall height is erroneously given by Hickmann as 13.3 cm (compare Hickmann 1949: Plate XXIII, C, D, first and fourth items from the left, and Plate XXV, C, leftmost item).

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6 Musical media, 3

Groups and ensembles; sanctity and divinisation; organisation and administration

6.1 Groups and ensembles

6.1.1 Introduction

Several scholars (see below) have noted that in ancient Near Eastern iconographic and written sources, various types of musical media are sometimes depicted or mentioned together as if constituting ensembles or groups. The phenomenon is most frequently attested in connection with the performance of cultic rites.

Some scholars have gone further and identified certain 'standard' groups of musical media associated with specific types of cultic rite (see below). The existence of standard groups is significant because it shows that in certain contexts the deployment of musical media was systematically regulated. Relevant sources provide evidence that, for example, the size and composition of each group of standard media was scaled to match the size (in terms of human participation), character and purpose of respective types of cultic activity. Traditions about the kinds of sound that were deemed appropriate in given ritual contexts would also have had a place in the regulatory process. The systematic regulation of musical media also carries implications about how the relationship between cultic worship and the musical elements associated with it was perceived in Near Eastern antiquity. This will be discussed below (§6.4).

The following subsections (§6.1.2–§6.1.4) present a survey of the main standard groups, focusing primarily on liturgies, rituals and processions (as defined in Chapter 2), these being the areas of ancient Near Eastern cultic worship which are most plentifully supplied with musical data in the primary sources. Pertinent collections of musical media are usually referred to as 'groups' or 'ensembles' in the secondary literature. However, those terms have not been applied consistently there, and have occasionally been used interchangeably. Although they overlap in meaning to some extent, they are not synonymous. Given that written sources from antiquity are rarely explicit about the interaction of musical media, even when types of musical media are mentioned in close textual proximity, and given that iconographic sources are sometimes uninformative about the cultic contexts of the singers and instrumentalists they depict, it has been considered appropriate to use only the term 'group' in the present survey since, in contrast to 'ensemble',

it is neutral with regard to the size, character and form of interaction (if any) of the musical media.

The groups are considered here in relation to two styles of cultic activity broadly categorised as 'large-scale' and 'small-scale', respectively. However, it is sometimes difficult to decide from the sources which category is the more appropriate for a given cultic activity. The allotment is therefore admittedly somewhat arbitrary, based on impressions gleaned about the character of an activity in addition to factual information. It is worth noting also that small variations in the composition of certain standard groups can occur.

6.1.2 In large-scale liturgies and rituals, typically temple-based

The rituals of the sacrifices of burnt offering in the Jerusalem Temple are noteworthy for the participation of two groups (§2.2.1). One is the group of massed males who sang cultic song (*shiyr*) and played 'harp' and lyre (*nebel* and *kinnôr*); the other is the small group of two trumpets (*ḥatsotserôt*) made of beaten precious metal and played by priests (HB Numbers 10.10). Post-exilic sources go further and identify two standard groups among the temple instruments (Smith 2011: 64–65; 68; 70): 'instruments of song' (*-keley-shiyr*), namely 'harps' and lyres (1 Chronicles 15.16; 16.5, 42; 2 Chronicles 15.13) and 'instruments of David' (*keley dawiyd*), namely 'harps', lyres and cymbals (*metsiltayim*) (1 Chronicles 23.5; 25.1; compare 2 Chronicles 7.6; 29.26, 27). It is possible that the latter identifications or similar distinctions were already in place in pre-exilic times (see below at §6.3.4).

At the Hittite Festival of the Warrior God the instruments *arkammi* (perhaps a drum or a large drum), *galgalturi* (perhaps clappers or cymbals), and *ḫuḫupal* (perhaps a lute) comprised a fixed group to which could be added the singing of 'liturgists' and 'psalmodists' (§2.2.2; §4.1.3; Schuol 2004: 108–128, 163–174).

In rituals at Mari, there were instrument groups consisting principally of lyres and **tigi**-drums (Ziegler 2007: 13–15). Dahlia Shehata has identified two groups of instruments deployed more generally in Mesopotamian temple rites (compare §2.2.3). One, which seems to have been associated mostly with praise and rejoicing, consisted of the drums **ala** and **tigi** and the drum or idiophone **šem** (Shehata 2014: 102–110). The other, which was associated with prayer and lamentation, comprised the **ub**, **šem**, **meze**, and **lilis** as solo instruments in various combinations, together with varieties of **balaĝ** drum and the solo voice of an officiant who uttered prayers and lamentations (Shehata 2014: 111–121).

Two ancient Egyptian temple groups of musical media from Old Kingdom Egypt have been identified (Lawergren 2001). One is a fairly general group comprising voice, clappers, harps, end-blown flutes and reedpipes. The other is identified by the name *khener* (*ḫnr*) used for groups of perhaps itinerant performers who operated in temples and royal residences, and in funerary contexts. They combined song, handclapping and dance (§2.4.4 and literature cited in n. 50 there).

6.1.3 In large-scale processions, typically out of doors, often into temples

Large-scale cultic processions were typical ritual events at major festivals as well as during the funerals of the human great and powerful and the re-enacted funerary proceedings of mythological personages and deities. They generally involved large numbers of people. The festive character (sometimes wildly so) of most processions engendered a much freer attitude to the choice of musical media than was the case with liturgies and rituals. This can be readily appreciated from Table 6.1, columns 2, 3 and 7, summarising the musical media deployed in three large-scale processions recorded in pre-exilic sources in the Hebrew Bible (HB). Certain core elements were standard across the regional boundaries: human voice, plucked-string instruments and drums. To these might be added wind instruments (end-blown flutes, reedpipes) and idiophones (clappers, cymbals, rattles) as deemed appropriate. It is possible that *ḫnr* would have taken part in processions in Egypt.

6.1.4 In small-scale rituals and processions

Small-scale rituals and processions were characterised by few participants and musical performance by soloists. While the types of musical media were not necessarily fewer than on large-scale cultic occasions, they were present typically as single specimens of their type. A group that was standard in all cultures of the ancient Near East was solo voice (male or female) accompanied by a plucked-string instrument for the delivery of prophecy (Israel and Judah: §2.5.1 between n. 56 and n. 57), for the recital of temple hymns (Anatolia: §2.2.2 after n. 12; Egypt: §2.2.4 between n. 22 and n. 24, and before n. 29; §4.5.2) and for the

Table 6.1 Musical media in cultic processions in ancient Israel/Palestine

Musical Media	*1 Sam. 10.5*	*2 Sam. 6.5*	*2 Sam. 6.15*	*1 Kgs 1.40*	*Isa. 30.29*	*Psalm 68.26[25]*
Clappers(?)		●				
Cymbals		●				
hand drum(s)	●	●				●
harp(s)'(?)	●	●				
lyre(s)	●	●				●
pipe(s)	●			●	●	
Rattles(?)		●				
Shofar			●			
human voice	●[1]		●[2]	●[3]	●[4]	●[5]

1 Prophets in ecstasy
2 Shouting
3 Rejoicing
4 Song, joy
5 Singers

utterances of the lamentation priests (Mesopotamia: §2.2.3 before n. 18). In Anatolia, drums and cymbals might be added to solo voice and plucked-string instruments during divination and oracular utterance. In Egypt, the solo instrument accompanying the utterance of temple hymns could be either a harp or a long end-blown flute. At the frequent Egyptian minor festivals, a group comprising two singers and two or three dancers was standard (§2.2.4; §2.4.4).

Two instances of possible small-scale processions exhibit standard groups of musical media. One has to do with the typical procession to or into a holy place in ancient Israel. The HB contains brief references to two such processions (HB 1 Kings 1.40 and Isaiah 30.29, respectively). Both references name pipes and imply song or glad vocalisation (Table 6.1, columns 5 and 6). The other instance has to do with processions during rituals at some of the larger Egyptian temples. They typically consisted of priests or priestesses accompanied by female 'chantresses' who sang and played sistrums (§2.3.5; §4.2.3.2) and menats (§4.2.3.4).

6.2 Sanctity and divinisation

6.2.1 Sanctity

The idea that sanctity accrued to structures erected as places in and around which cultic activity took place, and to the people who were appointed to officiate at the liturgies and rituals there (priests, priestesses and their assistants), has been mentioned earlier (e.g. §1.3.2, paragraph containing n. 13). Sanctity also extended to the material contents of sacred places, including the tools and other equipment needed in the preparation of sacrifices and the musical instruments played during the rites. The sanctity of instruments was manifested in several ways, most obviously by the very fact of their use in sacred rites. Individual instruments might manifest, or imply sanctification in various additional ways, for example: (a) by their association with particular cultic places, and with the worship of particular deities;[1] and (b) by their association with players who themselves were sanctified.[2] In writings, sanctity might be evident from the direct application of an epithet meaning 'holy' or 'sacred'.[3]

The sanctity of instruments was carefully protected. It was important that the instruments should not become 'unclean', that is, they should not lose their sanctity through contact with the profane world, and thereby be rendered unfit for use in sacred rites. There is evidence that this was achieved in two related ways. One was by their being dedicated for service at a specific cultic place or in the worship of a specific deity or in the hands of sanctified players (as at (a) and (b) above), so that even if they were removed from their sacred location, or from the sphere of influence of their dedicatory deity, they could not be played in profane contexts.

The other way of protecting the sanctity of instruments was to ensure that they did not leave the environs of the sacred place where they were used. Two excerpts from passages quoted earlier seem to imply the existence of rooms

within temples or temple precincts where instruments were stored and perhaps repaired and tuned. One, from 'The building of Ninĝirsu's temple' (*c.*2200–*c.*2100 BCE; ETCSL 2.1.7; §4.1.6), has 'Its [the temple's] drum hall is a roaring lion' (line 773). The other, from 'The Lament for Nibru' (*c.*2000–*c.*1500 BCE; ETCSL 2.2.4; §4.1.6), bewails the loss of a particular place in the temple 'where they used to while away the days in sweet playing of **tigi** drums in the brick buildings' (line 83). Both of those two excerpts are from Sumerian literature.

Two very different ancient sources, one in the HB, the other in an early rabbinic document, suggest that similar arrangements could have existed in the Jerusalem Temple, possibly as early as the pre-exilic period. The HB source is a statement in the narrative of the exiled prophet Ezekiel's vision of the Jerusalem Temple (HB Ezekiel 40–48). The statement reads: 'there were ⌞chambers for singers⌟ [*lishkôt shariym*] in the inner forecourt [of the temple]' (HB Ezekiel 40.44). 'Singers' in this context can probably safely be taken to include the plucked-string instruments which belonged with the cultic song intrinsic to sacrificial rites at the temple.

The early rabbinic source is a statement in the tractate *Middot* in the Mishnah, a compilation of Jewish oral law and teaching assembled over a period of some 130 years and completed in *c.*200 CE.[4] *Middot* purports to provide a detailed description of the post-exilic Jerusalem Temple as it was before its destruction in 70 CE. The statement reads: 'And there were rooms [*lishkôt*] underneath the court of the Israelites, opening onto the women's court, in which the Levites kept lyres [*kiynôrôt*], harps [*nebaliym*], cymbals [*metsiltayim*], ⌞and all the instruments of song⌟ [*wekol keley shiyr*]' (Mishnah, *Middot* 2.6).[5]

There are obvious issues with both statements in relation to the present topic, not least of which are the visionary context of one and the late date of the other. In both cases idealised and idealistic elements could be present, but these are unlikely to have influenced observations about architectural and structural details since such details would have been reasonably fresh in the individual and collective memory, and thus readily verifiable at the time when the respective works were composed. With regard to the HB Ezekiel text, Stephen Cook sees a problem with the presence of 'singers' in rooms in the inner forecourt of the temple, the court in which the altar stood and where only priests could serve (Cook 2018). The problem arises because he equates the singers in the Ezekiel text with the non-priestly Levites who served as musicians (singers and players of instruments) outside the boundary of the priests' court in the post-exilic Jerusalem Temple, as described in HB Chronicles (Cook 2018: 142–143), and referred to above in the quotation from Mishnah, *Middot* 2.6. It would indeed have been unthinkable that the inner forecourt – the priests' court – of the temple of Ezekiel's vision could accommodate non-priestly personnel. Cook would therefore emend the HB Ezekiel text 'chambers for singers' to read 'two chambers' following the Greek of the LXX, *duo exedrai* (Cook 2018: 133, 137, paragraph with headword '*Two*'). However, the relevance of the Levitical musical prerogative at the Jerusalem Temple as described in HB Chronicles

(post-exilic texts) to the pre-exilic situation envisaged in Ezekiel 40, is highly questionable (herein Chapter 1, n. 16). Furthermore, neither the HB nor the LXX version of the textual unit comprising Ezekiel 40.44–46, provides any information about the identity or status of the singers. There are therefore no grounds for believing that those singers were non-priestly personnel. Consequently, there is no good reason to doubt the integrity of the HB text of Ezekiel 40.44 as it stands. Cook's proposed emendation, denying the presence of singers in the inner forecourt of Ezekiel's temple, is unnecessary.[6]

Notwithstanding the issues discussed above, the two statements are valuable for showing that the idea of rooms on temple premises, where instruments could be kept and perhaps also tested, tuned and played, was not confined to Mesopotamia.

There was probably no material difference between instruments used in cultic rites and instruments of the same types used outside the cult. However, there was a perceived theological difference in that the cultic instruments were sanctified, whereas those for non-cultic use were not. This is aptly illustrated by a quotation from a late source, Mishnah tractate *Kelim* 15.6A, which states, 'Harps for singing [by ordinary people] are unclean, and [*or* "but"] harps of the sons of Levi are clean' (Mishnah, tractate *Kelim* 15.6).[7]

6.2.2 Divinisation

In ancient Near Eastern polytheistic cultures, divinisation was the application of divine attributes and status to individual beings or objects that did not belong to a pantheon of gods and goddesses. The phenomenon arose perhaps as a result of a heightened sense of reverence for objects, commodities, persons, and even professions already hallowed by their employment in cultic rites and rituals in temples. It seems that the divinised items did not have the same status as the deities of the pantheon, but were regarded as 'under-deities', as it were, who might assist 'major' deities. Individual musical instruments were among the cultic objects that were divinised.[8] Mesopotamian sources are the most informative about the divinisation of musical instruments. Nevertheless, it is clear that the phenomenon was known also in Anatolia, Egypt, and Levantine Ugarit (Franklin 2013: 44, n. 4). In ancient Israel and Judah, the monotheism of the religious culture centred on the Jerusalem Temple naturally excluded the possibility of the worship of a plurality of deities.

Divinisation is signalled in ancient written sources in two main ways. One is by the use of determinatives in the text. In transcriptions from Sumerian, the determinative is 'dingir' (or its abbreviation 'd' alone), meaning 'god', written as a superscript prefix (e.g. $^{\text{dingir}}$**ub**, or $^{\text{d}}$**ub**, 'divine **ub**[-drum]'). In transcriptions from Akkadian, the determinative is *ilu(m)*, also meaning 'god', functioning as an epithet and written in italics on the line, normally as a discrete item. The abstract, 'divinity', is *ilūtu*. The determinatives are thought to have been used only in writing, and that they were not pronounced in reading aloud or in conversation.

The other way in which the divinisation of musical instruments is signalled is through evidence that they were recipients of offerings (Franklin 2016: at n. 5).

The types of offering varied considerably. Franklin (2013: 43) lists 'animal sacrifice, spices, oil, fruit, and jewelry' as typical items, to which Shehata (2014: 117) adds 'libations'. Individual ritual circumstances may have determined whether divinised instruments were played when they were venerated and received offerings. Some texts speak of instruments being 'placed' at a particular spot to receive offerings, implying that they were not sounded, whereas others do not (Franklin 2013: 53–55). It is also possible that divinisation is to be inferred from the motifs symbolising gods or goddesses with which some instruments were decorated (Franklin 2013: 44, n. 4).

For divinisation to operate, it was necessary that subjects were rendered individually identifiable. Many instruments were therefore personalised by being given a name (Franklin 2013: 45; Shehata 2014: 118–120; Franklin 2016: approaching n. 41). Examples of named instruments have been encountered earlier: Lugal-igi-ḫuš ('Red-eyed lord', §2.2.3 at n. 16) and Ushumgal-kalama ('Great serpent/dragon of the land', §2.3.4; Shehata 2014: 119). Many more are known from the literature (e.g. Shehata 2014: 118–121).

Divinisation was most probably conferred in a special ritual. The evidence for this comes from a group of first-millennium BCE Mesopotamian tablets bearing texts concerned with the divinisation of the **lilissu**-drum. Despite the relatively late date of the tablets, their evidence is reckoned to reflect traditions with roots in much earlier times (Franklin 2013: 44–45). But the extent to which it is representative of the process of divinisation elsewhere in the ancient Near East is uncertain.

6.3 Organisation and administration of cultic music

6.3.1 Introduction

In the ancient Near East, the music establishments of temple and royal court were closely associated and well organised. The close association of court and temple was especially marked in the city states of Anatolia (§2.2.2) and Mesopotamia (below) where each state was ruled over by its resident 'king' (or 'chieftain' or 'overlord') who was also the main (often sole) benefactor of the local temple, and thereby also of the local cult. That the royal purview embraced both court and cult was an accepted norm. It was symptomatic of the outlook which knew no separation of 'sacred' and 'secular', and which was underlined by the typical close physical proximity of ruler's residence and temple – the two visually most prominent buildings in every capital city.

The close association of court and cult meant that there was royal oversight, and to some extent control of the musical establishments of both spheres. This was important for the king's prestige at home and abroad because it ensured that standards of organisation and performance commensurate with royal status were maintained in the two most highly profiled institutions in the kingdom.

6.3.2 Mesopotamia

Documents from Mesopotamia, covering a period of some two and a half millennia from approximately 3000 BCE onwards, provide insights into how music establishments there were organised and illuminate the situations and stories of individual musicians (Ziegler 2007; Shehata 2009; Ziegler 2011). The documents show that the model for the provision of music had a hierarchical structure with the local ruler at its head. The highest musical office was that of the Chief Musician (Akkadian: *nargallum*; Sumerian: **nar gal**). He was appointed by the ruler and had overall responsibility for the music of both court and temple. It seems that the Chief Musician might have had to administer acrobatic dancers and jesters as well as singers and instrumentalists. The office is attested in Mari in the Early Dynastic period (*c.*2900–*c.*2350 BCE), the Old Babylonian period (*c.*1830–*c.*1531 BCE), and during the reign of Zimri-Lim (1775–1762 BCE). In Ur during the Third Dynasty (*c.*2100–*c.*2000 BCE), there was probably a Chief Musician for each provincial city. In Assyria the office is attested during the Middle Assyrian period (*c.*1400–*c.*900 BCE) and in the seventh century BCE during the reign of Assurbanipal (*c.*668–*c.*627 BCE).

Subordinate to the Chief Musician was the Chief Lamenter (**galamāhum**). His duties included responsibility for singers generally as well as for the singers who delivered lamentations. It was normal that the Chief Musician delegated his musical responsibilities at the temple to the Chief Lamenter who thereby became important as the leader of the music of the cult. This was the case in Mari in the Old Babylonian period, and in southern Mesopotamia. The office, or something similar to it, is attested in seventh-century BCE Assyria during the reign of Assurbanipal who apparently had a 'Head Singer' named Bullbuṭu (Ziegler 2007; Ziegler 2011: 297–298). The office of Chief Music Instructor, subordinate to that of Chief Musician and perhaps parallel to that of Chief Lamenter, is mentioned in connection with the music establishment at Mari, but the appointment may have been to the court alone (Ziegler 2007; Ziegler 2011: 290). Some of the cities of northern Mesopotamia acquired two Chief Lamenters when flooding in the south made cities in the low-lying coastal region uninhabitable, and their populations had to move north. Evidence from the Old Babylonian city of Sippar-Amnanum (modern name: Tell ed-Der) about its Chief Lamenter Inana-mansum and his adopted son Ur-Utu implies that the line of succession for this position was hereditary (Ziegler 2007; Ziegler 2011: 300).

Ordinary musicians (and the other performers for whom the Chief Lamenter was sometimes responsible) came lowest in the hierarchy. An interesting feature of music administration in both court and temple is that blind musicians were particularly valued because as 'safe from visual distraction they were thought to possess a more focussed, more distinctive musical talent, a belief which Mesopotamia shares with many other cultures including Egypt and Greece' (Ziegler 2011: 294).

6.3.3 Egypt

In ancient Egypt, the relationship of court and cult was similar to that in a Mesopotamian city state insofar as the ruler, the pharaoh, stood at the head of

a hierarchical system. The main difference was that the pharaoh was sole ruler over the whole land, the size of which made delegation of his authority to regional governors a practical necessity. Although the pharaoh was the prime benefactor of the cult, his or her influence over what took place in the performance of the cultic rites would have been more or less indirect in places distant from the royal residence. As far as cultic music was concerned, this probably meant that the music establishments at the majority of temples were relatively free to follow their own traditions.

A small number of ancient Egyptian sources concerned with military establishments and military personnel suggest that a hierarchical system of organisation for military musicians, similar to the system for court and temple musicians in Mesopotamia, obtained in Egyptian armies. A pertinent example is a hieroglyphic inscription on a limestone stela from Late Period Memphis (664–332 BCE) which mentions the Chief Trumpeter Pasherenmut, son of the Chief Trumpeter Wedjahormedenyt.[9] The inscription implies both a hierarchic structure and a hereditary line of succession.

In cultic settings, the singers, instrumentalists, and dancers who served at the liturgies and rituals, were organised in 'phyles', that is to say 'divisions', 'shifts', or 'watches', taking tours of duty in rotation (Teeter 2011: 35; §2.2.4). The phyle system was a model for the organisation of a workforce engaged in prolonged or periodic labour-intensive tasks; it seems to have applied originally to crews of ships, groups of priests and priestesses in temples, and teams of temple builders and other construction workers. Each workforce (or body of members of a profession) was generally divided into five phyles during the Old Kingdom, and four phyles during the New Kingdom.[10] The *muu* dancers and the *ḫnr* were probably phyles.

It seems likely that a phyle could be further divided in cases where few musicians were required. A papyrus from the temple complex at Lahun in the late Middle Kingdom period gives a timetable for the attendance of dancers and singers at festivals during the course of one year in the Twelfth Dynasty, perhaps within the reign of Senusret II (*c.*1842–*c.*1837 BCE) or Amenemhat III (*c.*1818–*c.*1770 BCE).[11] It shows that in the months for which it preserves records there were generally from one to three festivals each month (possibly as many as seven in the first month of the flood season, the first month of the year; in the fourth month of the winter season no festival is listed). Two singers are normally named as having attended for duty at each of the festivals for which singers are specified. All the singers named in the papyrus are male.

6.3.4 Israel and Judah

There is a dearth of concrete information about the organisation and administration of cultic music in ancient Israel and Judah. The little that can be said on the subject with confidence has to be deduced from the many scattered, often passing references to song and instrumental music in the pre-exilic texts of the HB. It is true that the biblical books of Chronicles provide a wealth of detail

about the music of the Jerusalem Temple, but those books are post-exilic texts, and the musical details they provide are elaborations of the pre-exilic histories they purport to relate. The elaborations probably owe more to the musical situation at the temple in their authors' own day than to the musical situation there before the exile. This does not mean that all the musical information provided by HB Chronicles must be rejected; some of it may well be valid for earlier times. Nevertheless, the propagandising literary context of the musical information given in Chronicles, and the unprecedented quantity of unverifiable new but supposedly historical musical information given there, render the books of Chronicles unreliable as witnesses to the organisation of Israelite and Judahite cultic music prior to the exile (Smith 2011: 38–39). Having said this, it will be necessary later in this discussion to consider the role of post-exilic biblical and rabbinic texts in illuminating the state of cultic music in pre-exilic times. Until then, the main concern here will be with evidence supplied by the primary sources from the time of ancient Israel and Judah, namely the pre-exilic texts of the HB.

According to the relevant pre-exilic sources, there was a strong link between court and temple, as was the case elsewhere in the ancient Near East, although the evidence is insufficient to show the extent to which the ruler oversaw or controlled what happened in the temple and the cult. The impression left by the sources is that although King Solomon was the builder of the pre-exilic temple, and although his successors were its respective benefactors who, like Solomon himself, often attended and sometimes officiated at the rituals, rulers did not normally concern themselves with the organisation or administration of worship or its music. If this impression is a reasonably accurate reflection of reality, responsibility for the temple music and the music of the cult generally can be assumed to have rested with the religious authorities and personnel themselves.

Two pre-exilic passages from the HB illustrate the active interest of rulers in music at the temple. One belongs to a parenthetic note within the narrative of the Queen of Sheba's visit to Solomon (HB 1 Kings 10) after the temple was built and dedicated (HB 1 Kings 6–8). The pertinent passage has:

> Moreover, Hiram's fleet, which carried gold from Ophir, brought in from Ophir a huge quantity of *almug* wood and precious stones. The king [Solomon] used the *almug* wood for decorations in the House of the LORD and in the royal palace, ⌞and for harps and lyres⌟ [*wekinorôt ûnebaliym* 'and for lyres and harps'] ⌞for the musicians⌟ [*lashariym* 'for singers'].
>
> (HB 1 Kings 10.11–12)

Readers are probably meant to understand from this that the 'singers' comprised two groups: those who served in the temple and those who served in the royal palace. The use of *almug* wood (possibly red sandalwood, a highly prized hardwood) for their instruments may be seen as reflecting the desirability of equally high standards of musical provision in court and cult.

The other passage comes at the end of a hymn of thanks purportedly composed by Hezekiah, King of Judah from *c.*715 to *c.*686 BCE, on his recovery from a life-threatening illness (HB Isaiah 38.10–20; §2.2.1 between n. 1 and n. 4). The hymn is written in the first person, as if by Hezekiah himself. In its last verse (verse 20) he announces that 'we' will play 'my' stringed instruments at the 'house of the LORD' (that is, the temple) for the rest of 'our' life. In this stylised, poetic declaration of how he will express his gratitude, Hezekiah the ruler aligns himself, perhaps in a literal way, with the cultic musicians of the temple.

With regard to cultic worship itself, the many scattered musical references elsewhere in the pre-exilic biblical texts make it clear that the provision of music for temple and cult was organised according to generally accepted systems, but does not normally go into detail about the systems. The evidence varies between the more and the less concrete. With regard to evidence that appears to be less concrete, it is worth bearing in mind that metaphors, similes and typologies function because they reference common and widely understood experiences, thereby implying customary or at least frequently recurring action. It may also sometimes be the case that events which are reported as if they happened only once, belonged within frequently recurring ritual contexts and therefore that they themselves are likely to have recurred frequently. Some examples will serve as illustrations.

Among the prophets, First Isaiah writes of

> a song [*hashiyr*] as in the night when a holy festival is kept; and gladness of heart, as when one sets out ⌞to the sound of the flute⌟ [*beḥaliyl* "with pipe"] to go to the mountain of the LORD, to the Rock of Israel.
>
> (HB Isaiah 30.29; NRSV)

The prophet Amos refers to songs [*shireyka*] and the music of harps [*nebaleyka*] in association with offerings and sacrifices (HB Amos 5.21–24).

Among the HB Psalms, two exilic items place song and the playing of plucked-string instruments firmly in the context of cultic worship at the Jerusalem Temple (Psalm 43.4 – at God's altar) and in Zion/Jerusalem (Psalm 137.1–6). When the author of the latter psalm writes of a 'song of the LORD', and complains, 'How can we sing a song of the LORD on alien soil?' (NJPST), he emphasises that the music he refers to was exclusive to the worship of the Israelites' deity.

Two pre-exilic psalms present typologies of music at temple and royal court, respectively: Psalm 40.3[4] has: 'He [the deity] put a ⌞new song⌟ [*shiyr ḥadosh*] into my mouth', and Psalm 45.8d[9d] typifies courtly luxury in terms of 'ivoried palaces' and the music of stringed instruments (*miniy*).

Two unusually detailed examples of musical organisation in the cult in pre-exilic times are provided in HB Numbers 10 and HB Psalm 68, respectively. The first example falls within a group of divine prescriptions for the Israelites' use of trumpets in camp life, battle, and cultic worship (Numbers 10.1–10). It begins by commanding Moses to make 'two silver trumpets … of hammered

work' (10.1–2; NJPST), and a little later requires that the trumpets be blown by 'Aaron's sons, the priests,' and pronounces that they – the trumpets – 'shall be for you an institution for all time throughout the ages' (10.8; NJPST). The prescriptions conclude with the requirement that

> on your joyous occasions – your fixed festivals and new moon days – you shall sound the trumpets over your burnt offerings and your sacrifices of well-being. They shall be a reminder of you before your God: I, the LORD, am your God.
>
> (10.10; NJPST)

The text also requires the two silver trumpets to be blown to signal the assembly of the 'whole community' and the 'chieftains, heads of Israel's contingents', and the movements of the 'divisions' (10.3–6). The terms translated 'contingents' and 'divisions' are military terms; 'divisions' also brings to mind the Egyptian phyles.

The second example occurs in HB Psalm 68 where verses 25–26 (verses 24–25 in English versions) provide a short but clear description of processions at the Jerusalem Temple. Processions began in an outer courtyard and proceeded inwards to the more sacred parts of the temple:

> Men see Your processions, O God, the processions of my God, my king, into the sanctuary. First come singers, then musicians, amidst maidens playing timbrels.
>
> (HB Psalm 68.24[25]–25[26])

Here there is perhaps a hint of a layered order of importance (although not necessarily a hierarchy), with singers at the top, players of stringed instruments below them, and young women playing hand drums in third place.

In addition to the above examples of more or less concrete evidence for the organisation of music at the pre-exilic cult, one more factor should be taken into account. The HB books of Exodus, Leviticus, Numbers, and Deuteronomy provide detailed prescriptions and timetables for the programme of sacrifices prescribed for the Israelites throughout each year. The programme was demanding in terms of both material and human resources. In addition to two daily sacrifices (one in the morning, the other in the evening) there was a weekly sabbath sacrifice, a monthly new moon sacrifice, sacrifices on the first and last day of each of the three annual pilgrim festivals of Passover (Unleavened Bread), Weeks (Firstfruits) and Booths (Tabernacles/Harvest), a sacrifice annually on the Day of Atonement, and a sacrifice annually on the Festival of Trumpets. Nowhere in the prescriptions for the sacrifices is music mentioned, except at HB Numbers 10.2, 8, 10, where the priestly blowing of two metal trumpets is prescribed for all 'fixed festivals', as noted above and earlier. Nevertheless, as has also been noted above (§6.2.1, paragraph before n. 4) and earlier (§2.2.1 after n. 9), cultic music consisting of song and the sound of plucked-string instruments and sometimes cymbals, was also intrinsic to sacrifices

of burnt offering. In this light, and given the heavy demands on human resources made by the programme of sacrifices, it is reasonable to assume that the musicians' service would have been organised in such a way that there was some kind of system in place which regulated the deployment of musicians so that there would be continuity in the provision of cultic music.

To what extent there was a climate for concerns about such concepts as regulated deployment of musicians, and continuity in the provision of cultic music, in the religious culture of ancient Israel and Judah is debatable. But it is clear that in the organisation of the musical service at the post-exilic Jerusalem Temple, those concepts were very much to the fore. Post-exilic biblical and extra-biblical sources show that in the post-exilic temple, practical, custodial, fiscal and musical duties were the responsibility of Levites; specific Levite clans and families were allotted to the various duties (detailed survey, concentrating on the Levite musicians' duties, in Smith 2011: 66–70). The clans and families were divided into 'divisions', sometimes called 'courses' or 'watches', which took turns in doing duty at the temple. The Levite musicians were drawn from the families of Asaph, Heman and Jeduthun, and were responsible to the respective heads of families (HB 1 Chronicles 25.1–7). However, one Chenaniah is said to have been in charge of the music because he was a 'master' (1 Chronicles 15.22, 27). The musicians, like the priests with whom their service was closely associated, were divided into 24 divisions of 12 individuals each. Each division served for eight days at a time, from one Sabbath to the next. The changeover of divisions probably took place after the Sabbath morning sacrifice so that the next division was in place for the Sabbath evening sacrifice.

The basis for the comprehensive system of organisation outlined above was a set of prescriptions regarded as having originated with King David (e.g. HB 1 Chronicles 25–27) although one lone voice ascribes them to the 'Book of Moses' (HB Ezra 6.18). Their implementation is credited in the HB to King David himself (e.g. 2 Chronicles 7.6), King Solomon (e.g. 8.14), King Hezekiah (e.g. 29.25), and King Josiah (e.g. 35.15).

The organisation of the musical service as described in the biblical books of Chronicles has basic similarities to systems prevalent elsewhere in the ancient Near East, especially in Egypt, in respect of structure (each workforce was divided into several hierarchically ordered teams), deployment (the teams served in rotation), and succession (often hereditary). However, the Mesopotamian and Egyptian systems of organisation are attested much earlier than the system described in HB Chronicles and later extra-biblical works. It is tempting to suppose that a system similar to those older ones might have been in place in pre-exilic Israel and Judah. Several factors would seem to support the supposition:

1. In the system described in HB Chronicles, it is Levites who performed the various non-priestly sacred duties, including the musical ones; their division of labour was organised similarly to the phyle system in Egypt.

2. In pre-exilic HB texts, Levites are also frequently mentioned as having responsibility, for practical duties connected with cultic worship and its sacred objects.
3. The system described in HB Chronicles is said to have been built on Davidic traditions (or Mosaic) and to have been implemented by several pre-exilic kings, including David himself.
4. In the exilic biblical book of Ezekiel, Ezekiel's vision of the Jerusalem temple mentions that there were 'rooms for singers' in the inner court of the temple, the court of the priests (HB Ezekiel 40.44).

Taking the above points 1 and 2 together, Levites are common but there is no mention in pre-exilic sources of Levites performing musical duties.

As for point 3, there is no pre-exilic record of any of the pre-exilic rulers establishing a system of organisation for the deployment of cultic musicians. David, Solomon, and Hezekiah are credited with the composition of several items of sacred poetry, which would have been delivered as song or chant, but the pre-exilic texts which purport to deal with their historical lives say nothing concrete about their musical prowess except in the narratives of the episodes in which the young David played a lyre to calm King Saul's troubled soul (HB 1 Samuel 16.16–23; 18.10). The ascriptions of poetic works to David, Solomon, and Hezekiah were probably honorific. Some of the compositions ascribed to David and Solomon were written well after their supposed authors' lifetimes. There is no musical information whatsoever about King Josiah. Nevertheless, recent reassessments of the lives and careers of Hezekiah (Vaughn 1999; Young 2012) and Josiah (Sweeney 2001) open for the possibility that at least those two rulers could have implemented systems of musical organisation similar to those of the Davidic tradition described in HB Chronicles.

If the biblical text cited in point 4 cannot be accepted as it stands, and Cook's emendation 'two rooms', following the LXX text, be preferred (see the discussion above at §6.2.1, between n. 5 and n. 6), it is irrelevant to the present discussion. If, on the other hand, the passage can be accepted at face value, it does provide evidence of the existence of a system for organising the provision of cultic music at the pre-exilic temple. In that light, its broader context, which identifies all who served in the inner court as priests descended from the Levitical line of Zadok, raises the question of whether the singers could be regarded as Levites, and whether they were likely to have been the same sort of Levites as those who were the musicians in the post-exilic temple (see §6.2.1, n. 6). Clearly, they would have been Levites of a kind, but they were priestly Levites, whereas the Levites who served at the post-exilic temple were not and were therefore not allowed to enter the priests' court.

Nevertheless, there is considerable uncertainty about whether the HB text or the LXX text should have priority. The uncertainty is reflected in various modern English translations, some of which favour the HB's 'rooms for singers' (e.g. KJV; NRSV; NJPST; LEB), others of which favour the LXX's 'two

rooms' (e.g. NEB; REB; NIV). At present it is impossible to know which form of words reflects what Ezekiel meant his readers to understand.[12]

A final verdict on the question of whether the Mesopotamian and Egyptian systems for the division and deployment of labour could have influenced the way in which provision of a musical service at the pre-exilic temple was organised must at present remain open. While there is strong circumstantial evidence to suggest that the pre-exilic provision of cultic music at the Jerusalem Temple was well organised, concrete evidence about the mechanics of any such system of organisation is lacking.

6.4 Concluding remarks about musical media

From what has been written so far in this chapter, it is clear that tradition was the main regulating factor in the deployment of musical media in ancient Near Eastern cultic activity. Decisions about the kinds of media that were appropriate in given cultic situations were based on the musical traditions embedded in the mythological poetic and prose narratives belonging to the respective Near Eastern religious cultures. When the deities were honoured by praise, or by re-enactment of their great deeds in ritualised form, or by obedience to their specific commands, the instruments that were played in those rituals were the instruments which in the stories were played by the deities, played in the deities' presence, or which the deities had commanded to be played. Thus, through mythological tradition, certain musical media became associated with both particular deities and particular ritual circumstances. As a musical medium, the human voice had a unique place in the rituals. It was able to utter both the mythological source for the ritual action and the prayers, hymns and laments which might have accrued to the myth.

Tradition also had a theological dimension. The sanctity of musical media followed naturally from the mythological basis of cultic activity. The myths were stories about the sacred world; their ritual re-enactment and the presentation of ideas derived from them were thereby sacred acts performed by humans. They enabled humans and deities to draw closer together in a form of mystical–spiritual dialogue (compare Schuol 2004: 203). In this light, the divinisation of instruments may be seen as an expression of extreme religious piety, perhaps a mark of profound homage to voiceless, wordless human creations the sound of which could be a channel for people to approach the world of the deities, and at the same time a channel for deities to approach the world of people. The mythological and theological foundations for the deployment of musical media meant that those media were intrinsic to cultic worship and other forms of cultic activity such as mantic traditions and warfare.

There is clear evidence, both explicit and implicit, that systems for the administration of cultic music and musicians were in place in each of the regions of the Near East. The existence of such systems underlines the importance the ancients attached to music as an integral element of cultic activity. The

universality of the idea is a noteworthy feature of the ancient Near Eastern cults, perhaps a symptom of the 'underlying common core of religious culture' referred to in the Preface.

Notes

1 For example, the instruments associated with singing praise to the deity at the Jerusalem Temple (HB Psalm 43.4; HB Psalm 137.4–5 ['the LORD's song']; §2.2.1); the sistrums decorated with representations of the Egyptian goddess Hathor and other goddesses (§5.2.3.2).
2 For example, the instruments played by the musicians who officiated in cultic rites at the Jerusalem Temple (HB Psalm 43.4; HB Psalm 137.1–5; §2.21, preceding and at n. 9); the drums beaten by the **pashesh**-priests in the temple at Kesh/Kish in Sumer ('The Kesh Temple Hymn', line 114; ETCSL 4.80.2; §2.2.3); the kettledrum beaten by the *mashmashu*-priest in the temple during the celebration of New Year in Babylon (ANET: 333; §2.2.3); the instruments played by the Egyptian temple 'chantresses' dedicated to deities and temples (§2.3.5).
3 For example, as in some Sumerian texts where the word **ku** or **kug** 'holy, sacred' is added to the names of certain types of instrument (§2.2.3 at n. 17; ETCSL 2.5.3.1, line 38: **ub$_3$ kug li-li-is$_3$ kug** 'holy **ub** and holy **lilis** drums'; ETCSL 2.5.3.1, line 41: **balaĝ kug li-li-is$_3$ kug** 'holy **balang** and holy **lilis** drums'). The Akkadian equivalent is *ellu* 'pure, holy'.
4 For a comprehensive introduction to the Mishnah, see Neusner 1988: xiii–xlii.
5 The English translation is mine. Compare the translations by Neusner 1988: 877, which is somewhat free, and Blackman 2000, vol. 5: 513. Transliterations are from the Hebrew of the parallel Hebrew/English edition of the Mishnah by Blackman (as above).
6 The text of Ezekiel 40.45–46, in both HB and LXX versions, makes the point that some of the priests envisaged as serving in the temple's inner forecourt are of Levite descent through the priest Zadok (but note Cook 2018: 142). Perhaps it is legitimate to speculate that the 'singers' of HB Ezekiel 40.44 were regarded by Ezekiel as being drawn from among those Levitical priests. Perhaps this reflected pre-exilic practice at the temple.
7 Translation from Neusner 1988: 921. The phrases 'harps for' and 'harps of' are expressed by *nibeley*, the construct form of *nebel* (transliteration from the Hebrew of Blackman 2000, vol. 6: 106). See also Smith 2011: 153.
8 On divinisation in Near Eastern antiquity, both in general and with special reference to musical instruments, see Selz 1997; Franklin 2013; Shehata 2014; Franklin 2016: Part 1, Section 2.
9 University College London, Petrie Museum, Stela UC14510. See DEU at: www.digitalegypt.ucl.ac.uk/memphis/uc14510.html; and Stewart 1983: no. 7, Plate 6.
10 The word 'phyle' is borrowed from Greek *phulē* which was used in the bilingual decree of Canopus (237 BCE) to translate the Egyptian *sa*/*za* (*s3*/*z3*) used there for the divisions of priests (Allam 1993). The classic work on Egyptian phyles is Roth 1991. On the divisions and deployment of construction workers for building pyramids and other funerary complexes, and for their service there, see, more recently, Wilkinson 2010: 68; Snape 2011: 33–34, 58, 59; Vymazalová 2013. Phyles were not the same as the 'guilds' of which Gordon wrote (Gordon 1962: 37–40, 78, 252–253). The latter were 'closed corporations' for 'skilled craftsmen and professional men' (Gordon 1962: 253, 38, respectively).
11 Papyrus UC 32191; see DEU, 'A Late Middle Kingdom Account, Listing Festivals', at: www.digitalegypt.ucl.ac.uk/lahun/festivallistmk.html.

12 The uncertainty here points to problems which often surround the evaluation and interpretation of biblical texts. They have to do with the length of time between the estimated date of composition of a text and the date of its earliest extant attestation in writing. The longer the time of transmission, the greater the possibility of accidental or wilful alteration. In addition, versions in ancient languages other than Hebrew (most typically Aramaic and Greek) may reflect different traditions of the text, which circulated alongside others and which themselves may have been subject to similar vicissitudes during long periods of transmission. In the present instance, the problems are unusually complicated. Briefly, some of the most important details of transmission of the Hebrew and Greek texts of HB Ezekiel 40.44 are as follows:

A. *Hebrew Text (HB), 'rooms for singers' (number of rooms not stated)*

1. Ezekiel prophesied *c.*593–*c.*571 BCE. The eponymous biblical book may have been composed *c.*580 BCE.
2. Earliest written Hebrew attestation: Aleppo Codex of *c.* 950 CE. Online at: http://aleppocodex.org/newsite/index.html
3. Earliest witness to the *sense* of the Hebrew text is the Latin of Jerome's *Vetus Vulgata* (the Vulgate), completed *c.*400 CE, which has *gazofilacia cantorum* 'repositories of the singers'.

B. *Greek Text (LXX), 'two rooms' (no mention of singers)*

1. LXX completed *c.*200 BCE.
2. Earliest written Greek attestation: Codex Vaticanus (*c.*350 CE). Codex Vaticanus, MS Vat. Gr. 1209, p. 1194.
3. Earliest attestation of the *sense* of the LXX text: Jerome, *Commentariorum in Exechielem*, Book 12 [on Ezekiel 40] (410–414 CE). In this commentary, in Latin, Jerome remarks that the LXX text has 'two rooms'; Pat. Lat. Vol. 25, columns 391–395.

C. *Anomalies*

1. Targum Jonathan to Ezekiel (Aramaic; first or second century CE; earliest extant written attestation: medieval, *c.* eleveneth century CE) has *lishkat ley-wa'ey* 'rooms for Levites'. Safira online at: https://www.sefaria.org/Targum_Jonathan_on_Ezekiel.40.44?lang=bi&with=all&lang2=bi
2. Jerome, *Commentariorum in Exechielem*, Book 12 [on Ezekiel 40] (410–414 CE). In this commentary, in Latin, Jerome remarks that the LXX text has 'two rooms', but notes that the Hebrew text has *gazofilacia cantorum* 'repositories of the singers' and lacks a word for 'two'. Pat. Lat. Vol. 25, columns 391–395 (compare B.3 above).
3. There are no attestations of Ezekiel 40 among the extant Dead Sea scrolls and other texts from the Judaean desert.

Those details raise four questions, none of which has yet been satisfactorily investigated:

1. How does the reading in Targum Jonathan to Ezekiel (above at C.1) fit into the history of the transmission of Ezekiel 40.44?
2. Is it reasonable that priority should be given to the LXX text at this verse?
3. (a related question seeing that the LXX text is regarded as a translation from a/the Hebrew text): Did the writer who was translating into Greek misread the Hebrew word *shariym* 'singers' as *shinayim* 'two', given that in unpointed Hebrew the two words look very similar and could easily be mistaken?

Did a copyist of the Hebrew misread 'two' for 'singers' at some stage between, say, 200 BCE and *c.*400 CE when Jerome's *Vetus vulgata* (Vulgate) was completed (above at A.3)?

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7 Approaching the musical sound-world

7.1 Introduction

It is axiomatic that the musical sound-world of the ancient Near East would have been very different from that of modern Western and Western-influenced cultures. In addition, the sound-world of modern Middle Eastern cultures themselves cannot be taken for granted to have retained much of their very ancient musical traditions, exposed as they have been to thousands of years of influences from the Western world and the further distant Orient. A possible exception to this picture is the traditional music of ancient and conservative religious groups in the Middle East. Their music stands to have retained more of its ancient character than the music of other areas of society; but even here there will have been changes over time. Using examples of modern manifestations of traditional music as analogues of the sound of music in antiquity is always fraught with danger. However, this is not to deny that consideration of what today are deemed to be ancient musical traditions can sometimes, when handled with appropriate circumspection, throw meaningful light on the sound-world of the distant past.

In order to approach an understanding of the musical sound-world of the ancient Near East, consideration will be given here first to the concept of 'music' in ancient western Asia, and then to the idiom of the musical sound itself.

7.2 The concept of 'music'

The ancient languages of the Near East had no words for 'music' in the modern Western sense of the organised sound itself. A careful reading of the ancient texts dealing with music, such as those cited in the preceding chapters, shows that they do not display any awareness of organised sound as an independent, discrete aural phenomenon, the form, content and performance of which could be appreciated for their own sake. Nor do they display any awareness of organised sound alone as a vehicle for the expression of human emotions. For the writers of those texts, organised sound was regarded as integral with various kinds of human activity which in themselves were not necessarily overtly

'musical' in the modern Western sense. Thus the closest the ancient Near Eastern cultures came to the modern Western idea of 'music' was the combination of human activity and sound. This concept was prevalent throughout the Near East in antiquity, and is amply attested not only in the written sources but also in the ancient iconographic material presented and referred to in earlier chapters here.

The pertinent kinds of human activity to which organised sound belonged may be broadly categorised as 'functional', 'verbal' and 'performative'. The presence of sound as an element integral to functional human activity may be exemplified by the use of trumpets and horns for summoning to assembly, summoning to battle, directing troops in battle and directing large groups of people encamped and in transit.

Sound that was intrinsic to verbal activity is widely attested in the utterance of hymns, liturgies, oracles and incantations. Both the sound of the human voice uttering words in chant, recitative or more mellifluous song, and of instruments, especially bells, drums, lyres and harps, were essential elements.

Sound as an essential element of performative activity is also widely attested. Such activity may be taken to embrace dance and drama. In both written and iconographic sources, the hand drum and the pipe are closely associated with dance. Drama is regarded here as encompassing the performance of ritual (including the ritual re-enactment of stories from mythology) and the performance of ritual pugilistic acrobatics and ritual entertainments by itinerant groups such as the *muu* and the *ḫnr* in Egypt (von Lieven 2016).

Ancient Greek culture was familiar to the peoples of the western Near East from early antiquity onwards. The ancient Greek concept of 'music' was similar to that described above except that it also admitted the idea of organised sound as a discrete phenomenon, as is shown by, for example, the Greeks' interest in popular competitions in which advanced instrumental and vocal performances were highly prized. The enforced Hellenisation of the Near East in the fourth and third centuries BCE, which came in the wake of Alexander the Great's conquests, meant that the Greek concept of 'music' became the norm over a wide geographical area. Nevertheless, the ancient Near Eastern concept of music remained in place alongside the Greek, especially in religious contexts where individual competitive prowess in vocal or instrumental performance would have been inappropriate.

In the Mediterranean lands and the ancient Near East there was a widespread belief that the sound of musical instruments, including instrumental noise, possessed magical powers to ward off underworld demons and their malevolent designs on human beings (e.g. Quasten 1983; Görg and Botterweck 1995). Sounding the instruments would banish chthonic influences and bring peace to troubled human souls. This was an additional functional activity associated with the sound of instruments. The point here is not that instrumental sound was held to be 'good' or 'calming' or 'soothing' in itself, but rather that it was considered to be anathema to the underworld demons. The demons supposedly cringed from the sound and retreated to the nether regions, leaving the way

clear for holiness, sanctity, goodness and purity to enter. Thus, instrumental sound was seen not as intrinsically good, but as an agent of beneficence for human beings. It is this belief in the apotropaic and prophylactic power of instrumental sound that lies behind, for example, the suspension of small golden bells from the hem of the robe worn by the high priest in the Jerusalem Temple (§5.2.3.3, fourth paragraph), the placement of bells and symbolic miniature models of harps and lutes among grave goods, perhaps with an ideophonic purpose (§4.3.2; §5.2.3.3), and the ringing of bells in conjunction with incantations (Mesopotamia: §5.2.3.3). In ancient Egypt, as well as elsewhere, the sound of bells, clappers, cymbals, enclosed rattles, sistrums and menats served to keep the malevolent underworld demons at bay.

It was by no means idiophones alone that were deemed to possess apotropaic and prophylactic powers. The two metal trumpets which the deity is said to have commanded the Israelites to make (HB Numbers 10.1–2a) also had an apotropaic function when they were sounded by priests 'over' the sacrifices in the Jerusalem Temple (§2.3.2). The repeated priestly blowing of animal horns during the intimidation ritual at the Battle of Jericho, as narrated in HB Joshua 5.13–6.27, also reflects belief in the apotropaic properties of instrumental sound (§3.2.1, last two paragraphs). The sound of drums had an obvious apotropaic function in cultic contexts.

However, the most prevalent kind of apotropaic sound attested in the cultic life of the ancient Near East was that of plucked-string instruments, primarily the lyre, but also the harp (especially in Egypt before the Middle Kingdom, e.g. §2.2.4 with n. 24). It was ubiquitous and pervasive, belonging to large-scale temple rites and to more intimate kinds of cultic activity, such as the utterance of oracles (e.g. §3.1.1–§3.1.3), the singing of hymns (e.g. §2.2.1, between n. 9 and n. 10; §2.2.2, after n. 12; §2.2.4, after n. 32) and the delivery of laments by lamentation priests or lamenters (e.g. §2.2.3, the three paragraphs preceding n. 18; §3.1.1). It might even have been heard in connection with warfare (§3.2.1; §3.2.3, end of paragraph preceding n. 14). Belief in the power of the sound of plucked-string instruments to dispel evil forces is also attested in less obviously cultic contexts. For example, it is this belief that lies behind the narratives of the young David playing a lyre to calm the troubled Saul (HB 1 Samuel 16.16–23; 18.10),[1] and it perhaps explains the presence of plucked-string instruments in the inventories of royal courts and palaces (e.g. HB Psalm 45.8[9]; Woolley 1934: 69–70, 74–77, 249–258; §6.3.4, inset quote and subsequent paragraph).

7.3 The idiom of instrumental music

In order to approach an understanding of the idiom of the music – the sound of the music itself – it is necessary to take into consideration two related areas of knowledge. One is organology insofar as it is concerned with the general characteristics of the sound of each of the various instrumental musical media. The other is musicology insofar as it is concerned with ideas that governed the

choice of pitches and the ways in which the chosen pitches were brought into conjunction with each other to form units of connected pitched sound. The two areas of knowledge are, of course, interrelated, but for the purposes of discussion they will be considered separately here. The idiom of vocal music will be discussed separately from that of instrumental music.

7.3.1 Organology: general characteristics of instrumental sound

The general characteristics of the sound of the various types of instrumental musical media are governed by several universally applicable and fairly obvious factors. These are, basically, size, material, construction and method of sound production. Those have been covered earlier in some detail in Chapters 4 and 5. Aside from delving into the complexities of scientific organology, basic organological knowledge, insofar as it bears on the characteristic sound of instruments, can be reasonably easily obtained from the factors just mentioned combined with the outward physical appearance of the instruments as represented in iconography, preserved in material remains and described in written sources. It is also the case where ancient instruments are concerned that their sound and methods of sound production have much in common with those of certain modern instruments, which greatly assists our appreciation of the likely sound of instruments in antiquity.

7.3.2 Musicology: pitch and structure of instrumental sound

By contrast, musicological knowledge about the pitch and structure of sound in the ancient Near East is almost exclusively reliant on the interpretation of ancient texts which employ a wealth of unfamiliar and uncertain terms referring to musical technicalities. Modern Western ideas of musical form, structure and tonal organisation are of little or no help in clarifying the theory or theories governing ancient Near Eastern music, as will become evident as this chapter progresses.

Research conducted from the early 1960s onwards has shown that systems for the realisation of sounds at relative pitches existed in Mesopotamia and the northwest Levant from at least as early as the eighteenth century BCE. Nothing comparable can so far be claimed for ancient Israel and ancient Egypt. There are no known technical descriptions of music nor any examples of instrumental music notation extant from ancient Israelite culture (see below). Music notation has been preserved from ancient Egypt, but it is late Greek notation of non-indigenous music styles (some is Coptic) extant in papyri dating from the third century BCE to the fifth century CE (e.g. Johnson 2000; Lawergren 2001; von Lieven 2002). It is thus not relevant to Egyptian antiquity as studied here. The many ancient Egyptian depictions of musical duos consisting of a flautist or harpist with a dancer or singer have given rise in the past to speculation that the depicted hand and finger gestures of the dancers/singers represent chironomy which directed the instrumentalists, and might have conveyed information

about musical intervals, pulse and rhythm (Hickmann 1960; Manniche 1991: 27, 30–33). However, interpretation of the depicted finger and hand gestures as chieronomy is very uncertain since the gestures could be simply graphical stylisations of kinaesthetic movement inspired by dance or song. Some of the depictions show the dancer/singer placed behind the instrumentalist, or the instrumentalist as a blind or blindfolded performer, thereby rendering directive chieronomy pointless. In addition, there are many depictions of flautists and harpists playing alone, without attendant dancers or singers. Speculation about whether chieronomy was used to direct performing instrumentalists in ancient Egypt during the period covered here is therefore somewhat futile (Lawergren 2001; von Lieven 2002: 500–502).

Returning to Mesopotamia and the northwestern Levant, insights into the idiom of instrumental music in those regions are provided by cuneiform texts preserved on baked clay tablets. The texts are written in a variety of as yet imperfectly understood languages including Sumerian, Akkadian, Hittite, Hurrian and their dialects (Dumbrill 2005: 22). The difficulties encountered in rendering the contents of those tablets accessible to modern readers are considerable. In many instances the texts are open to a variety of interpretations.

Two groups of tablets are significant. One, from a broad area of Babylonian influence in the ancient Near East, contains technical information about the names and tuning of the strings of seven- and nine-stringed Babylonian lyres (West 1994; Dumbrill 2005: 11–110). The other group, from among some 1,500 tablets unearthed at Ugarit, and pertaining to the Hurrian culture of the northwestern Levant and mid-southern Anatolia, contains hymnic texts and musical instructions for the nine-stringed lyre (West 1994; Dumbrill 2005: 111–174).

7.3.3 The group of tablets from Babylonia

Serious scientific musicological and philological study of the Babylonian tablets began in the 1960s when important contributions to the research were made by Anne Draffkorn Kilmer (1960, 1965), Marcelle Duchesne-Guillemin (1965), David Wulstan (1968) and Oliver Gurney (1968). The Babylonian tablets have subsequently claimed the attention of many more scholars who between them have produced a large body of scholarly literature on Mesopotamian musical theory. Especially noteworthy in the literature to emerge since the beginning of the twenty-first century is an increased awareness of the importance of ancient Near Eastern mathematics for an understanding of Mesopotamian musical theory. The history of the research up to the closing years of the second decade of the twenty-first century has been summarised and commented by Leon Crickmore (2010).[2] Crickmore's review of the accumulated scholarship has also led him to suggest some adjustments to the then current ideas about the Babylonian tonal system (Crickmore 2010). His work, and that of other scholars working at around the same time, provides a cogent picture of the thinking about ancient Babylonian musicology at the time when he wrote, and reflects views which to a large extent have remained

current although the picture has been subject to small changes and is not completely static.

The texts of some 16 tablets and fragments of tablets relevant to music in ancient Mesopotamia have so far been published. Fifteen are discussed by Crickmore (2010, 2013), of which seven are major texts and have been published singly, while eight are found on tablet fragments and have been published in groups.[3] An additional relevant major text, identified by the siglum YBC 11381, was published by Elizabeth B. Payne (2010); it is noted by Crickmore but not discussed by him.[4] One or two texts are likely to be later copies of earlier texts or copies of parts of earlier texts. Some are lexical texts, others are mathematical texts (e.g. Kilmer 1960); practical information is often included in both types of text.

The tablets and tablet fragments on which those 16 texts are inscribed originated during a period stretching from approximately 2000 BCE to approximately 539 BCE, that is, from the beginning of the Old Babylonian period to the end of the Neo-Babylonian period. Taken together, they supply a large amount of information although none of it is directly concerned with musical notation.

The discussion which follows is based on a rationalised conflation of eight major texts: the seven discussed by Crickmore (herein n. 3) and the one published by Payne (herein n. 4). While this approach inevitably takes little account of nuances supplied by chronological and regional differentiation, it gives a useful general idea of the conventional thinking about the main elements of ancient Babylonian music theory.

7.3.3.1 Music theory in the Babylonian tablets

The eight major texts are concerned with pitched sounds produced by the harp and the lyre. More specifically, the information they provide has to do with the instruments' strings and their tuning and pitches.

STRINGS

The strings of the instruments are normally identified in two ways: they may be listed in numbered sequence, and each may be furnished with terminology which appears to indicate a property of the string or its physical position in relation to other strings. A bilingual Sumerian and Akkadian section of the tablet U.3011/Nabnītu 32 and its later copy UET VII 126, for example, refers to the third string as 'thin'; and to the fourth string as 'string-four-small' in the Sumerian text and as 'Ea-creator' in the Akkadian text. These and the other names for the strings in U.3011/Nabnītu 32 will be discussed below. Unusually, the numbering of the nine strings in this text is palindromic: 1, 2, 3, 4, 5, 4, 3, 2, 1.

Tablet CBS 10996, a neo-Babylonian tablet which has to do with a seven-string instrument, associates two pairs of numbers with each string (in transcriptions, each number is a single digit). The first digit of each first number pair

gives the string number in ascending numerical order 1–7, respectively; the digits of each second number pair seem to be in random order. No two digits in any number pair are numerically consecutive. There are thus 14 different number pairs. All the digits fall within the range 1–7. A unique name is associated with each number pair (Table 7.1).

It is assumed that the digits in each number pair refer to strings of the corresponding number in the listed numbered sequence of seven strings, and therefore that heptachordalism was a basic element in the organisation of the sound of the Babylonian harp and lyre. This is supported by certain texts dealing with nine-string instruments (e.g. U.3011/Nabnītu 32 and UET VII 74/U 7/80) which show that pre-existent terms for number pairs are reused for the 'supernumerary' strings, as are also some of the other terms.

Wulstan (1968: 225–226) has claimed that there is a strong correspondence between the tuning of strings of the lyre described in CBS 10996 and the pitches which the somewhat later ancient Greek theory of the 'harmony of the spheres' ascribes to planets of the solar system (Wulstan 1968: 225, with references to Plato and Cassius Dio).[5] On that account he would reckon that the strings of CBS 10996 sound the ascending pitches E, F, G, A, B, C, D, respectively.

Table 7.1 Tablet CBS 10996: schematic presentation of string numbers, number pairs, and their associated Akkadian names

A	*B*	*C*	*D*
1	1, 5		*niš tuḫrim*
		7, 5	*šerum*
2	2, 6		*išartum*
		1, 6	*šalšatum*
3	3, 7		*embūbum*
		2, 7	*rebūtum*
4	4, 1		*nīd qabli*
		1, 3	*išqum*
5	5, 2		*qablītum*
		2, 4	*titur qablītum*
6	6, 3		*kitmum*
		3, 5	*titur išartum*
7	7, 4		*pītum*
		4, 6	*serdum*

(After Dumbrill 2005: 37–39, and with the first term in col. D corrected from *nīš* GABA.RI, in accordance with Mirelman and Krispijn 2009)
A = string number; B = first number pair; C = second number pair; D = Akkadian name

The text of tablet YBC 11381 (herein n. 4) lists the nine strings of the Babylonian lyre in numerical order. For each string, the enumeration is followed by text which includes the name of a deity and a wish. The entry for the first string, for example, has: 'String One: May Aššur, the king of the gods, improve your dominion for you' (Payne 2010: 293).[6] The purpose of the divine names and the wishes is not clear.

TUNING AND PITCHES

It is a natural assumption that each string was tuned to a unique pitch and that therefore there were seven different pitches – heptatonicism. The idea of heptatonicism has prompted comparison with not only the ancient Greek idea of the 'harmony of the spheres' (above), but more so with music theory as expounded by Pythagoras and his followers whose explorations of the properties and relationships of pitched sound led to theoretical notions of 'perfect' intervals of the octave, the fifth and the fourth, and the theoretical concept of 'octave species' (schemes of seven notes ascending ladder-wise, as scales, and repeating in successively higher octaves).

While some commentators have accepted the idea that a Pythagorean system of tuning might have existed in Babylonia (perhaps in some proto-Pythagorean form) almost a millennium before Pythagoras lived, others have been more cautious and more historically aware, regarding the Pythagorean system as probably a development and refinement or systematisation of the Babylonian. Crickmore himself came to the conclusion that the ancient Babylonian harpists and lyrists most likely used a more natural (that is, less contrived) system of tuning akin to that known today as Just Intonation (Crickmore 2010: 16–18; compare Wulstan 1968: 218–219). In Just Intonation, the fourth, fifth and octave above a given starting pitch are also perfect intervals, but in addition the thirds and sixths are pure.

Consideration of musical intervals is reckoned to be significant because the pair of numbers in each number pair associated with an instrument's strings (e.g. Table 7.1, cols. B, C) has been assumed not only to refer to two strings, but also to indicate the musical interval sounded by those two strings. The latter assumption is based on the observation that the strings are listed in sequential numerical order, suggesting a ladder-like sequence of rising steps of pitch (if string 1 be the lowest-sounding string). Combining this observation with retrojected insights from Pythagorean musical theory, the seven string numbers are regarded as implying the seven pitches in a Pythagorean (or close to Pythagorean) diatonic scale.

In that light, it becomes apparent in the case of the text of tablet CBS 10996 that the two digits in each number pair are synonymous with the numbers of the strings to be played and the steps of the scale to which those strings were tuned. Thus, in the text of CBS 10996, the two digits 1, 5, in the first of the two number pairs at string 1, mean strings 1 and 5 and pitches 1 and 5, implying a rising fifth (Table 7.1, col. B). Similarly at string 2, the digits of the first

number pair mean strings 2 and 6 and pitches 2 and 6, also implying a rising fifth and so on for string 3. Thus the first of the number pairs for strings 1, 2 and 3, imply rising fifths, those for strings 4, 5, 6 and 7 imply falling fourths. The two digits in each of the second of the two number pairs in turn (Table 7.1, col. C) imply a falling third (string 1), two rising sixths (strings 2 and 3) and four rising thirds (strings 4, 5, 6, 7).[7] The two strings indicated by each number pair (and therefore the two pitches they produce) are regarded as having been intended to be played melodically, not as two-note chords.

The tablet UET VII 74 (alternative designation U.7/80) shows that there was a system in existence for adjusting the tuning of individual strings by small amounts where intervals produced by number pair tuning were considered to sound 'unclear' (Gurney 1968; Wulstan 1968: 220–223). The text of UET VII 74 also shows that 'scales' could be regarded as descending, at least in Old Babylonian times in the region where the tablet originated (Crocker 1978; Vitale 1982/1983; Krispijn 1990; Gurney 1994; West 1994: 167–168). Whether this would also have applied in the Neo-Babylonian period for tablet CBS 10996 is not known for certain. If it did, string 1 would have been the highest-sounding, string 7 the lowest. Thus, in Table 7.1, for example, the rising intervals would have sounded as descending, the descending intervals as rising, which would have produced different sets of two-note/two-string pitches according to the direction of reckoning.

The number pairs are reckoned to signify tuning patterns or an overall tuning pattern, since the names belong to the respective pairs of numbers as pairs of strings. An old hypothesis that they may represent some form of modality (Gurney 1968: 232; Wulstan 1968: 223–224), although not the same as medieval Western modality (Wulstan 1971: 3), is still current. Another elderly but long abandoned hypothesis is that each number pair and its name stands for a 'neume', whereby the two numbers indicate a span of strings – the two indicated and all in between (and therefore the corresponding number of pitches) – to be played in succession. This was proposed in relation to northwest Levantine tablets (Wulstan 1971: 375–381) and has been recently revived and likened to Arab *maqām* procedure (Dumbrill 2005: 112–163; Dumbrill 2017: 28, 31–33). Since the names of the number pairs in those tablets are mostly the same as those in the text of CBS 10996 (see below), the hypothesis that they stand for 'neumes' is deemed to be relevant also to the Babylonian texts in which they occur.

Whether implying modes or neumes or something else, there seems to be little doubt that the number pairs have to do with tuning patterns for harps and lyres, but how they might have operated is not known for certain. The hypothesis of the use of tuning patterns is supported by the texts of at least three tablets. One is tablet KAR 158 which, in listing song-types identified by names known from the number pairs in CBS 10996 (herein n. 3) and other tablets, suggests that tuning patterns beginning with the two pitches implied by the names, may have been used for the lyres accompanying the various types of song.

Another tablet is UET VII 74 which, as noted above, contains instructions for retuning strings by small amounts where there were otherwise 'unclear' intervals. This would seem to imply musical thinking involving a wider succession of pitches than only two at a time.

A third tablet, CBS 1766, first published by Horowitz (2006) and thought by him to be concerned primarily with astrology, lends support in a more direct way.[8] The text has two components. One is a table listing numbers. The other is a heptagram in the form of a star (already anticipated by Dumbrill 2005: 74). The star is enclosed in a circle the radius of which is such that its circumference touches each of the seven points of the star. A second circle, concentric with the first and a short distance outside it, circumscribes the whole. The points of the star are numbered 1 to 7, beginning with the uppermost point and proceeding clockwise to each point in turn. The star is drawn as an open heptagram, that is to say that the straight lines which form the angle of each point are drawn as chords of the first circle, extending visibly away from the point until they meet the circumference of that circle. Where each chord touches the circle's circumference it meets another chord at the angle appropriate to a regular heptagram. Following each chord from one numbered point to the next, and noting the number at each end, produces seven number pairs identical with those given at the string numbers in the text of CBS 10996 (Table 7.1, col. B). The heptagram on CBS 1766 has therefore been seen as a 'visual tuning chart', supplementing the numerical and verbal details in theoretical music texts such as CBS 10996 (Waerseggers and Siebes 2007: 44).

Friberg (2011: 128–131) presents CBS 1766 as one among several similar figures known from ancient Mesopotamian, Greek and Islamic texts, but does not offer an explanation of its meaning in musical terms. Crickmore (2008) finds a consistent approach to tuning in the four tablets CBS 1766, CBS 10996, UET VII 126 and UET VII 74 through the way in which reciprocals are applied to tuning numbers in CBS 1766. Shnider (2017) sees the tablet as an example of the close association of astronomy, mathematics and music in ancient Mesopotamia, but otherwise offers no practical comments beyond those of Horowitz (2006) and Waerseggers and Siebes (2007). Colburn (2009b, 2018) would see the heptagram as a source for the existence of intervals of seconds and sevenths in addition to the expected thirds, fourths, fifths and sixths. Crickmore (2010: 19) speculates that the picture of the heptagram with its surrounding concentric circles might suggest 'a design for some kind of rotating mechanism', and he goes on to wonder whether CBS 1766 could be 'the earliest known example of a tone-circle', predating the reference to a tone-circle in Ptolemy's *Harmonics*, Book III (*c.*100–*c.*170 CE). The former point has also been explored by Dumbrill (2009) who asks 'Is the heptagram in CBS 1766 a dial?'[9] His answer is a qualified yes, but his explanation of why a dial might be necessary lacks conviction. Crickmore (2010: 19) discusses at some length the question of whether CBS 1766 could be a pre-Ptolemaic tone-circle, but finds mathematical reasons why it could not.[10]

7.3.4 The group of tablets from Ugarit

The pertinent tablets from Ugarit consist of some 29 more or less complete items and approximately 40 small fragments from around 1400 to 1200 BCE, unearthed at modern Ras Shamra (ancient Ugarit). Typically, each tablet has a hymnic text in the Hurrian language (the Hurrian hymns or Hurrian songs) written at the top of the tablet, each line of which normally progresses in a spiral from recto to verso to recto, and so on. Beneath the hymnic text on the recto is a single or double horizontal line across the tablet, beneath which is a set of complicated abbreviated instructions, written in Hurrianised Akkadian, for realising the pitched sounds associated with the hymnic text. On a small number of the extant tablets a colophon is visible at the bottom of the verso, supplying various information, such as the name of the dedicatee or the name of the scribe (West 1994; Dumbrill 2005: 111–174). Dumbrill (2005) gives a detailed *catalogue raisonné* of the extant Hurrian hymn tablets, including the fragments, illustrated with hand drawings.

7.3.4.1 Music theory in the group of tablets from Ugarit

Serious musicological study of the Hurrian hymn tablets from Ugarit began in the late 1960s in the wake of the publication by Emmanuel Laroche of some of the texts in 1955 and more in 1968 (Laroche 1955, 1968). Güterbock was the first to notice that many of those texts had musical significance (Güterbock 1970). Their musical significance focused initially on the similarity of certain Hurrianised Akkadian terms in the Ugarit tablet texts and the Akkadian names of number pairs which in Babylonian tablet texts are associated with strings of the harp or lyre. This was a groundbreaking discovery which strongly suggested that principles of Babylonian musical theory existed over a considerably wider area and for a much longer period than was previously thought. It inevitably prompted much subsequent discussion (e.g. Kilmer 1971: 142–146; Wulstan 1971: 371;[11] Kilmer 1974). A recent list of the pertinent terms from Ugarit, corrected with the benefit of newer scholarship, shows that all the terms known from Babylonian tablets, except for *pītum*, are represented in the pertinent Ugaritic tablets (Halperin 2010: 29; compare Table 7.1, col. D). Most of the Babylonian terms are represented more than once, except for *išartum* which is represented by the apparently unique occurrence of *išarte* (Halperin 2010).

Despite the obvious differences in format and material content between the groups of tablets from Ugarit and Babylonia, the theoretical musical similarities to which they bear witness mean that in all likelihood their cultic plucked-string music belonged to one and the same sound-world. This realisation generated a new round of scholarly discussion which brought to the Ugaritic tablets all that had been learned, assumed and conjectured from the Babylonian ones, including speculation about scales, modes, neumes and tuning, as well as ideas about how the Hurrian poetic texts might have fitted to the musical notation (e.g. Wulstan 1971; Vitale 1982/1983; Duchesne-Guillemin 1984; West 1994: 172–178).

Of the several tablets from Ugarit containing useful detail about the idiom of Hurrian cultic music, the tablet designated h.6 ('h' = Hurrian) has been central to that discussion because of its very good state of preservation.[12] Several scholars have made transcriptions of the music of h.6 in modern notation, each according to his or her interpretation of the Akkadian and Hurrianised Akkadian instructions. Dumbrill (2005: 118–122, 130) assembled five transcriptions, four of which – by Wulstan (1971: 379), Kilmer (1974: 80), Duchesne-Guillemin (1984: 31)[13] and West (1994: 177), respectively – had been published previously, and one of which – by Dumbrill himself – was published for the first time (Dumbrill 2005: 130, Pl. 5). A further transcription was published in the early 1980s by Raoul Vitale (1982/1983: 261, Tableau 14). The diversity in the styles of transcription is remarkable. It is manifested not only in their length (West's two short lines as against Kilmer's, Duchesne-Guillemin's and Vitale's eight lines each), but also in their range of pitches (varying between a sixth and a ninth), the direction of their 'neumatic' figuration (falling fifths and rising thirds; rising fifths and falling thirds; mixed) and their provision of the hymnic text as over-/underlay (only in Kilmer and Duchesne-Guillemin; Vitale indicates the places during the lyre's music where he thinks the singing would have started and stopped). Kilmer's transcription is unique in being rendered in two-note chordal homophony throughout.

Such is the conventional thinking about ancient Babylonian and northwest Levantine music theory.

7.3.5 Issues and challenges

Notwithstanding the enormous amount of philological, linguistic, musicological and mathematical scholarship that has been devoted to deciphering and interpreting the tablets discussed above, the conventional thinking has several issues. A fundamental problem is that there are insufficient data of the appropriate type to provide anything approaching a complete understanding – or even an outline picture – of ancient Near Eastern music theory and its relationship to practical performance. That six scholars could produce six very different transcriptions of Hurrian hymn h.6 should have sounded a warning about this years ago.

Another problem has to do with chronology. There is widespread acceptance of the idea that the Mesopotamian music theory owed much to, or was similar to, Pythagorean or Pythagorean-style theory, in which the main structural elements were heptatonic diatonic scales and octave species. A simple look at the relative chronology suggests that the idea should be treated with the utmost caution. The earliest technical musical evidence from Mesopotamia comes from the Early (or Old) Babylonian period (*c.*2000–*c.*1600 BCE); the Hittite musical tablets date from *c.*1400 BCE. The latest evidence comes from tablets from the Neo-Babylonian period (626–539 BCE: CBS 10996; YBC 11381) and the overlapping Late Babylonian period (sixth century BCE: CBS 1766). It is known that the ancient Greeks had a developed theoretical system and means of notating music by around 500 BCE (Pöhlmann and West 2001: 7). Pythagoras himself is

reckoned to have lived from *c.*570 BCE to *c.*495 BCE, and Claudius Ptolemy, who is credited with the establishment of the idea of octave species, lived from *c.*100 CE to *c.*170 CE. It is fully possible that the latest group of Babylonian tablets reflect something of Greek musical thinking, but it is impossible to know whether the earliest groups of tablets might have had any relationship to ancient Greek music theory, if such existed so early.

A third problem is that the assumption that the numbering of harp and lyre strings from 1 to 7 (or 9) implies a scale-wise pitch progression graded from lowest to highest or the reverse, one pitch per string, is false. While a graded order of pitches corresponding to the graded numbering of strings might reasonably be assumed to be valid for harps (highest-sounding string at the apex, lowest-sounding string where the arms are at their widest), although internal strings could be tuned out of scale-wise sequence, such an assumption is invalid for lyres. On lyres the strings could easily be tuned out of scale-wise sequence, especially on symmetrical lyres, but also on asymmetrical instruments where the strings fanned out from a central or otherwise spatially compact anchor point at the resonator (§4.3.1.2). This means that a corollary assumption, namely that the numbers given to strings of harps and lyres indicate the relative pitch intervals between one string and another, is also invalid.

The conventional thinking has not gone unchallenged in print. In looking anew at the so-called 'music instruction fragments' from Nippur, Jerome Colburn (2009a) questioned the common view that those fragments provide tuning instructions. He proposed instead that they fit better as 'descriptions of musical performance', and cited the star-shaped heptagram of CBS 1766 in support (Colburn 2009a: 106; Colburn 2009b). Richard Dumbrill, in a short publication with the ambitious title *The Truth About Babylonian Music* (Dumbrill 2017) also questioned the view that the texts on some of the tablets were tuning texts. He included CBS 1766 in his discussion and added U.3011/Nabnītu 32, U.7/80 (UET VII 74), YBC 11381 and Hurrian hymn h.6 for which he provided a revised transcription (Dumbrill 2017: 32).

However, the main point of Dumbrill's deliberations was to challenge the view that heptatonicism, octave species and diatonic scales were the basis of Babylonian music. That view he regarded as a result of the inability of scholars to see beyond Western musical culture in their approach to Babylonian and Hurrian music. He railed against the many scholars who had 'used Western musicological tools' to analyse ancient Near Eastern music, and against their 'insistence at [*sic*] force-fitting a musical system into the Western model' (Dumbrill 2017: Introduction, p. 2).

Dumbrill approached his task in two ways. One was to argue that both heptatonicism and enneatonicism were important systems in their own right, and that enneatonicism was not merely heptatonicism extended by two pitches. He also suggested that systems using 11, 13, 15 and 17 pitches could have existed (Dumbrill 2017: 33).[14]

Dumbrill's other means of approach was to propose that ancient Babylonian and Hittite music was composed of successions of short units of sound, each

unit consisting of a small number of pitches played successively (it was this proposition that informed his revised transcription of h.6, referred to above). That some successions of sound units could be seen as heptatonic or enneatonic (or more) was, in Dumbrill's view, nothing more than the result of later musicological thetic reduction of all the different pitches to compact formats. This is a theme that has occupied him for many years. Already in 2005 he suggested that the ancient Mesopotamians' concept of music notation was 'syllabic', representing successions of small groups of pitches, just as their cuneiform script was syllabic, representing successions of small groups of units of meaning. He wrote: 'they [the Sumerians and Akkadians] naturally conceived their musical notation syllabically. It is this concept which led them to the perception of sequences of notes as independent structural entities' (Dumbrill 2005: 17). Dumbrill's suggestion cannot be proved, but given the close association of pitched vocal utterance and tuneable string sound in the cult, it is possible to see how the 'syllabic' construction of the language that was sung could have had a natural influence on the way in which its integral lyre and harp music was conceived.

7.4 The idiom of vocal music

In cultic contexts, the human voice would have uttered prayers, hymns, cultic poetry, incantations, mythologies, liturgies and cultic narratives (prose and poetry), all of which are likely to have been rendered as 'song', that is to say, delivered in some form of 'musical' style at specific pitches (Shehata 2009; Miller 2011; Ziegler 2011). It is reasonable to assume that the musical styles would have ranged from proto-musical heightened speech and rudimentary chanting, through recitative in simple and more advanced styles, to melodious song. It is also reasonable to assume that each type of text had its traditionally determined style of 'sung' delivery although some styles may have been appropriate to several types of text. The extent to which florid utterance was possible would most likely have been dependent on the number of singers involved and the skill of the individuals. Solo delivery of narrative and poetic material might possibly have given scope for improvisation within traditionally determined limits.

There are no theoretical or technical descriptions of vocal music, nor notational remains of vocal music, from the ancient Near East. The notes against which the hymnic text is placed in two of the transcriptions of the Hurrian hymn h.6 (see above) are conjectural since the notational 'instructions' apply to the accompanying harp or lyre, not to the singer (West 1994: 165–166). Whether or in what ways the singer might have 'followed' the instrumental pitches is not known. An attempt has been made to show that the cantillation signs and pointing applied to the text of the Hebrew Bible during the period from late antiquity to the eleventh century CE can be interpreted in such a way as to reveal the melodies (in Western European medieval plainchant style) to which the pertinent texts were originally sung (Haïk-Vantoura 1976, 1985). However, although the attempt has had its champions (e.g. Jourdan-Hemmerdinger 1986; Mitchell 2012), it is basically

unscientific, sometimes relying heavily on notions that are arbitrary and contrary to historical evidence (Cohen 1985; Daniels 1992). It cannot be relied upon to reflect the idiom of cultic vocal music in Israelite antiquity.

In the absence of pertinent musical notation, it is perhaps possible that some idea of what the idiom of ancient Near Eastern vocal music may have been like can be gained by adopting an approach suggested in the opening paragraph of this chapter, namely judicious consideration of what in more recent times have been deemed to be idioms descended from ancient Near Eastern cultic vocal musical traditions.[15]

Such idioms would be the oldest styles of cantillation of the Jewish Scriptures among Eastern Jews, and the musical recitative style in which the Qur'an is read by Eastern Muslims. Their styles are not identical, but they have certain features in common. One is that they are monodic; another is that the pitches follow those of the natural inflections of the language; a third is that short melodic formulas are used for punctuating and otherwise expressing the meaning of the text – medial, terminal and syntax-related motifs; and a fourth is that important words and concepts are thrown into prominence by being given characteristic musical figuration at each appearance. Thus the operation of heightened natural vocal inflection and special melodic figuration produce a melodic style that is structured by motivic figures (compare Dumbrill 2005: 17) generated from the text and its traditionally perceived sense.

The idea that motivic melodic figures were used as structural elements in ancient Near Eastern sacred vocal music has also emerged from research into Near Eastern synagogue chants undertaken by the ethnomusicologist A. Z. Idelsohn in the early decades of the twentieth century.[16] Idelsohn noted that motivic melodic structure was typical of chants used in Babylonia, Persia and the Yemen, places of ancient Israelite dispersion, for reading sacred scriptures in the synagogue (Idelsohn 1929: 24–25 [§a], 38). He seems to have assumed that what he heard was a rendering of the chants exactly as they would have sounded some two to two and a half millennia earlier. While this would have been an unrealistic assumption as far as melodic identity is concerned, there seems no reason to doubt that the motivic melodic structure noted by Idelsohn was a very ancient traditional feature of chants used for formal scripture reading in the Near East.

Idelsohn noted several additional stylistic features in the chant he heard, some of which may perhaps provide deeper insights into the idiom of ancient Near Eastern sacred vocal music. The most significant features to which Idelsohn drew attention are listed below (Idelsohn 1929: 24–28). Idelsohn's own interpretations and use of his findings raise many issues, especially with regard to relative chronology, preservation of melodic identity and the process of oral transmission. Also, given the passage of time since Idelsohn wrote, it is inevitable that some aspects of his work have been superseded (see the critique in Smith 2011: 225–227). The following list itemises the objective results of Idelsohn's research, concentrating on the musical methods, principles and procedures to which he drew attention:

1. traditional melodic figures as structural elements (as noted already);
2. microtonal intervals;
3. monodic style;
4. improvised ornamentation following accepted conventions;
5. oral tradition of transmission (no musical notation);
6. unison or random parallel intervals in communal song; and
7. semi-melodic motivic recitative for formal reading or reciting to an audience.

Item 6 in the list is somewhat surprising in view of item 3. However, the use of random parallel intervals should not be regarded as implying an interest in harmony; rather, it suggests that each participant, although singing simultaneously with the others, chose an individually convenient pitch. Microtonal intervals are not likely to have been uniform (Smith 2011: 227). The extant Eastern cantillation and reading traditions show additionally that there is no sense of intrinsic tonal hierarchy although certain pitches recur as medial and terminal points of rest.

This is, of course, conjectural and general as far as Near Eastern antiquity is concerned. Nevertheless, whatever its shortcomings may be, it may be helpful in approaching an understanding of the musical mindset of temple singers, lamenters, lamentation priests, mourners, reciters of liturgies and sacred myths, mediators of prophecy and divination, and chanters of incantations in the ancient Near East.

7.5 Concluding remarks

From what has been written so far in this chapter, it might seem that the conventional thinking about the concept and idiom of ancient Near Eastern music rests on somewhat shaky foundations, and that what has been regarded as a general consensus of solid knowledge is, in fact, mostly conjecture, speculation or supposition, based on anachronistic premises and circumstantial evidence. Some of that knowledge is indeed less than reliable but has acquired an aura of respectable permanence through its frequent repetition or its persistent but uncritical use as a basis for further ideas. Nevertheless, not all the apparently unreliable knowledge is without foundation. Given the nature of the sources and their distance in time, space and mindset from modern Western culture, it is not the case that 'knowledge' will always be empirical; it often masquerades under other names, of which 'likelihood', 'reasonable conjecture' and 'common sense' are typical examples. In this light, and having in mind the criticisms and challenges directed against the conventional thinking as described above, it is appropriate to take stock of what is not known or is doubtful, and of what is known or can reasonably be assumed, in order that research can move forward on a firm basis. Relevant points are discussed in the next two subsections below. A third and final subsection suggests a number of areas where further research could be beneficial.

7.5.1 What is not known or doubtful

There is no clear evidence about what the tonal system was, if there was actually a system founded on the relationship of pitches. There is also no clear evidence for the existence of scales in the modern sense, except possibly as a thetic notion connected with information in some of the latest Mesopotamian tablets. The notion that a comparison of the (supposed) tuning of Mesopotamian harps and lyres with ancient Greek ideas of the 'harmony of the spheres' suggests precise pitches for the strings of those instruments (§7.3.2.2, second paragraph after Table 7.1) is highly suspect (see §7.3.2.5, fourth paragraph) since individual pitches cannot be identified from the cuneiform sources. The idea that there may have been a relationship between Babylonian music theory and ancient Greek music theory of Pythagoras and his followers is unfounded. Apparent similarities arise from later scholars' retrojection of Pythagorean ideas into pre-Pythagorean Babylonian music.

It has been proposed that numbers traditionally associated with deities (god-numbers) had to do with the tuning of plucked-string instruments, but this is highly speculative (§4.3.2.1, third paragraph; n. 17 herein). Also highly speculative is the widely held view that higher mathematics such as algorithms, ratios and reciprocals were important for determining the tuning of harps and lyres (§7.3.3.1, last paragraph before §7.3.4).

There is no evidence for the concept of 'melody', that is to say, the idea that a succession of instrumental or vocal pitches could have intrinsic musical interest. Nor is there evidence for the use of harmony, the deliberate sounding of more than one pitch simultaneously.

It is not known whether instruments were built so that when they were played in groups they sounded the same pitches or the same groups of pitches as each other. Perhaps duetting instrumentalists playing the same kind of instrument as each other played alternately.

It is not known how vocal and instrumental sound fitted together in performance. It cannot be automatically assumed that voices and instruments capable of producing pitched sound used the same pitches as each other, or that instruments followed vocal pitches exactly or in heterophony or at all (Smith 2017b).

7.5.2 What is known or can reasonably be assumed

The ancient Near Eastern concept of music was that sound (vocal or instrumental) was integral with human activity. This was so in both cultic and non-cultic contexts. Particular types of sound might be associated naturally or traditionally with particular forms and contexts of human activity. Sound was not cultivated as a discrete medium to be enjoyed for itself. Instrumental sound (including noise) was believed to have possessed apotropaic and prophylactic powers. This was so generally, but is most frequently attested in cultic contexts.

Despite the number and variety of types of musical media associated with the religious cults, technical musicological information about the music is extant

only for harps and lyres (seven-stringed and nine-stringed), only from within cultic contexts, and only in sources from Babylonia and the northwestern Levant/southern-central Anatolia. Some commentators have given the impression, perhaps unwittingly, that this information characterised all Mesopotamian music, or even Near Eastern music as a whole, but this is misleading.

Harps and lyres were the only instruments that could be tuned to multiple pitches and retuned as required. Tuning patterns, perhaps traditionally determined, were the main structural elements in the cultic music of harps and lyres. In some cases, individual strings were named after deities. The string music was without tonal hierarchy and likely made use of microtonal (to modern Western ears) intervals.

As far as other instruments were concerned, pipes were capable of sounding a limited number of pitches. But the number of possible combinations of size, design (bore; number of finger-holes), material (bone; wood; reed; metal), manufacture (natural tube; natural tube modified; artificially constructed tube; number of tubes; single reed, double reed or none), and playing techniques militate against the presence of any theory governing their musical idiom. Of the lip-vibrated wind instruments, it seems unlikely that a large trumpet would have been capable of sounding more than one note. A small trumpet and a horn would probably have been able to sound two notes a natural fifth apart.

Bells sound pitches that are often difficult to identify, despite Hans Hickmann's list of the pitches of 33 ancient Egyptian bells in the Cairo Museum (§5.2.3.3). Nevertheless, the list shows two clear groupings: 26 bells with a medium range G3–C5 (the pitch C4 is not represented) and seven bells with a high range F-sharp5 to B-flat5 (G5 is not represented). There is thus a gap where the pitches C-sharp5 to F5 are missing. As speculated in Chapter 5, this may hint at a differentiation of purpose such that the small, high-pitched bells may have been used as ornaments, or votive offerings,[17] the larger, medium-pitched bells as cultic instruments. There is no evidence that drums were tuned to specific pitches. The sources give the impression that relative size, producing low, medium and high regions of pitch, would have been the main deciding factor for their areas of use in the cult.

Vocal music was in all likelihood monodic, generated originally from the inflections of spoken language and structured motivically. As with the sound of harps and lyres, vocal music was probably without tonal hierarchy and probably made use of microtonal intervals. When the sound of plucked-string instruments and voices occurred together, the instrumental sound was regarded not merely as accompaniment, but as integral with the vocal element.

In general, it may be noted that intervals approximating to what in modern terms are known as thirds, fourths, fifths, sixths and octaves occur naturally. They are partials (also called overtones or harmonics) of the theoretically infinite harmonic series and are present in varying quantities and strengths above any pitched sound that is not deliberately set to be produced without overtones. They are perceptible in each note sung by the human voice in a resonant acoustic and are often prominent in the sound of metal bells, especially those of

medium pitch and lower. They are naturally available on unfingered pipes of the flute type. The notes naturally obtainable on a valveless lip-vibrated wind instrument belong to the harmonic series. The two notes characteristic of the hunting horn call – in ancient as well as modern times – are the second and third partials of the harmonic series. The interval would have been familiar to the ancients and likely imitated by them in vocal music and on harps and lyres. However, if the Mesopotamians had no sense of 'scales' it is unlikely that they would have regarded the two notes as an interval, but rather as isolated pitches which they experienced as occurring naturally and frequently in conjunction with each other. This would imply, for example, that what modern ears would hear as a fifth, or an octave, would have been heard by the ancients as two different pitches, unrelated except by their natural occurrence.

7.5.3 Suggestions for further research

There are several aspects of the concept and idiom of ancient Near Eastern music which would benefit from further research. In some cases, such research would be an extension of ideas already presented. In other cases, it might explore new areas.

7.5.3.1 Extending existing ideas

Colburn (2009a, 2009b) has already presented a hypothesis that the texts of the tablet fragments from Nippur and the text of the tablet CBS 1766 are concerned primarily with performance, not tuning. It is possible that tablets in addition to the fragments from Nippur and CBS 1766 might describe musical performance rather than, or as well as, tuning. For instance, the palindromic numbering of the nine strings listed in U.3011/Nabnītu 32 and its later copy UET VII 126 could perhaps be an indication of the disposition of the player's two hands, one on each side of the instrument, in relation to the strings they played (compare the discussion in Dumbrill 2017: 1–7). An examination of additional tablets from a similar standpoint could be of interest in defining the scope and purpose of ancient Near Eastern tablets concerned with music.

Dumbrill's suggestion of motivic structure for the music of tuneable chordophones (Dumbrill 2005: 17; Dumbrill 2017) is of interest in relation to the idea that vocal music was likely motivically structured (§7.4). However, as yet, Dumbrill's suggestion is an embryo, and the idea of motivically structured vocal music is conjectural (although reasonable). If both the suggestion and the conjecture could be developed and compared, and the implications of Dumbrill's suggestion discussed in relation to string pairs, note pairs and tuning patterns, the results could further illuminate the idiom of ancient Near Eastern cultic vocal and string music, each individually and in combination.

An area of ancient Near Eastern music that has been studied only sporadically is its relationship to astrology and cosmology. Astrology, cosmology and music in the ancient Near East were first discussed by Wulstan in the course of

an article on the tuning of the Babylonian harp (Wulstan 1968: 225–226; §7.3.2.2). More recently, Crickmore, in an article entitled 'Planets, Heptachords and the Days of the Week: The Harmony of the Spheres' (Crickmore 2013), has extended the ground covered by Wulstan. Both authors are keen to show that what they consider to be the theoretical basis of music extracted from ancient Near Eastern cuneiform tablets is very similar to the theoretical basis of ancient Greek music of the time of Pythagoras, Plato and Cassius Dio, the structure of which makes use of pitches associated with planets and the days of the week. Crickmore, in particular, goes to great lengths to convince his readers that the Mesopotamian tablets may possibly contain the 'roots from which the ancient and sophisticated concept of the "harmony of the spheres" would eventually grow' (Crickmore 2013: Section 6.1, with Crickmore's Table VI).[18]

Neither Wulstan's nor Crickmore's articles say anything directly about the relationship of ancient Near Eastern cultic music to astrology and cosmology during the period covered here. However, there is a small quantity of evidence of such relationships from Mesopotamia and Hittite Anatolia from within the period. The Hittite evidence is the most precarious. It consists of a cylinder seal with images of a bull's head, star symbols and a vaguely human figure playing a handheld instrument, perhaps a hand drum (Hartner 1965: Pl. VIII, Figure 15). Mesopotamian evidence is partly implicit and partly explicit. For example, the heptagram in CBS 1766 has the form of a seven-pointed star. Did this have astrological significance or was the star form no more than the most convenient way to represent tuning procedures in graphical form? On the other hand, the tablet YBC 11381 lists nine strings of a harp or lyre, enumerating each one and associating it with the name of a deity, as has been noted above (§7.3.3.1, *Strings*). The second string is associated with the deity Ishtar (in Akkadian; Inanna in Sumerian), whose stellar form was the planet Venus, the evening and morning star. Ishtar's emblem was normally an eight-pointed star. The ninth string is associated with the deity Enmešarra, a sun god (the two tablets referred to here were not published when Wulstan wrote in 1968). The evidence briefly presented here is scant, but there may well be additional chronologically relevant evidence from the same regions and from elsewhere in the ancient Near East. Closer attention to the relationship between cultic music and astrology and cosmology could be valuable in assessing the extent to which ancient Near Eastern cultures regarded cultic music as symbolising a mystical unity of humanity, divinity and the stars.

7.5.3.2 Exploring new areas

To begin with, little or no systematic consideration has been given to the rationale behind the specific choices of instrumental sounds used in the various types of cultic activity. While the association of sound and ritual may broadly be a mixture of traditional choice and apotropaism, it is also legitimate to ask why bells were generally associated with incantations, why metal trumpets with sacrifices, why drums with processions and why plucked-string instruments were

associated with ritual and liturgical song. Was the fact that harps and lyres could be tuned a significant factor in their use as cultic instruments? Did tuning allow for the expression of depths of meaning greater than the undifferentiated sound of plucked strings could suggest?

Second, it is noteworthy that in the tablets U.3011/Nabnītu 32/UET VII 126 the number of the nine strings is palindromic, whereas the numbering in other tablets is sequential. It is also noteworthy that harps and lyres have different structural designs. Palindromic string numbering would suit a lyre (especially a symmetrical instrument, where the shortest string is likely to be the middle one, with progressively slightly longer strings on each side of it), whereas a sequential numbering would suit a harp where the shortest string would be nearest the apex and the remaining strings would be gradually longer as the arms of the instrument became wider apart. Could these factors point to the existence of different tuning patterns for harps and lyres?

Third, it has long been known that even in Greek antiquity there was an acknowledged discrepancy between theory and practice in the tuning of harps and lyres (Holford-Strevens 2010: 328 and n. 9 there). Was this also the case in ancient Mesopotamia and the northwestern Levant? This raises questions about the nature and purpose of 'theory' in both ancient Greek and ancient Near Eastern music. Was it archival, idealising, intellectual, prescriptive, or a mixture of some or all of these? How much actual 'music theory' can be distilled from the cuneiform tablets from Babylonia and Ugarit? It would be helpful if there were some informed discussion of these questions.

Finally, there is now a pressing need for studies that highlight chronological and regional differentiations in the primary sources. Some work has already been done with this in mind, but as data – historical and cultural as well as musical – accumulate rapidly, attention to their relative time and place becomes increasingly important for a meaningful historical appreciation of music in religious cults of the ancient Near East.

Notes

1 Antonietta Provenza (2014) seems not to have fully appreciated this point with regard to those areas of ancient Near Eastern culture which were not affected by Greek influence, especially in the periods prior to the active Hellenisation of the Near East. This is particularly noticeable in her discussion of 'David and the Kinnor' (Provenza 2014: 323–324). In the HB text of the narrative of David playing the lyre to calm Saul (HB 1 Samuel 16.16–23), it is significant that the Hebrew in the last clause of verse 23 uses a form of the verb *sûr* 'depart, turn aside' for the movement of the evil spirit. Similarly, the Greek of the LXX at this verse has a form of the verb *aphistēmi* 'depart, withdraw'. This is usually faithfully reproduced in English translations, e.g. KJV and NRSV: 'and the evil spirit departed from him.'

2 The list of references given by Crickmore (2010: 22) constitutes a comprehensive bibliography of the development of the research from the 1960s onwards.

3 The seven major texts discussed by Crickmore (2010, 2013) are from the following tablets: UET VII 74 (also known as U.7/80), Old Babylonian, published by Gurney (1974); UET VI/3 388, possibly an instruction text; CBS 10996, neo-Babylonian,

possibly a copy of a much older text, published by Kilmer (1960); UET VII 126, a late (early first-millennium BCE?) copy of a section of the tablet Nabnītu 32; U.3011 (alternative designation of Nabnītu 32, a bilingual text from third-millennium BCE UR, published by Gurney (1974); KAR 158, an Akkadian catalogue of song types, from Assur, Middle Assyrian period (second half of the fourteenth to the end of the tenth centuries BCE), first published early in the twentieth century CE (Ebeling 1919: 267–276, item No. 158, 'Hymnenkatalog'; image of tablet online at: https://cdli.ucla.edu/dl/photo/P282615.jpg. Copyright CDLI at: https://cdli.ucla.edu) but its musicological significance did not become apparent until the mid-1960s (Duchesne-Guillemin 1965; Kilmer 1965); and CBS 1766, date and provenance unknown (perhaps late Babylonian), contains a star form heptagram, published by Horowitz (2006). The eight fragments listed by Crickmore (2013, Section 1) are published as follows: six fragments from Nippur, the so-called 'Music Instruction fragments' were published in two groups, one comprising fragments N3354 & N3355 & N7745 & N7679 ('N' = Nippur), the other comprising fragments UM 29–15-357 & N3020 ('UM' = University Museum, Pennsylvania). The two further fragments, namely BM 65217 & BM 66616 ('BM' = British Museum), were published together as a group. On the 'Music Instruction fragments' from Nippur, see, for example, Kilmer and Tinney (1996) and Colburn (2009a).

4 The additional relevant major text is YBC 11381 from the Yale Babylonian Collection (Payne 2010). It is noted in Crickmore (2013: Section 9, n. iii). Its date is unknown but is likely to be Neo-Babylonian (Payne 2010: 291).

5 The references to Plato (*c.*428 or *c.*424–*c.*348 BCE) and Cassius Dio (*c.*155–*c.*235 CE) cited by Wulstan are: Plato, [Dialogue] *Timaeus*; Dio Cassius, *History*, 37.17–18.

6 At the entries for strings 2–8 inclusive, the enumerations and wishes are followed by glosses clarifying the readings of certain names or terms from the immediately preceding text.

7 However, it is important to bear in mind that only the intervals originating or ending on string 1 are likely to have been 'perfect' or 'pure'. If the text of CBS 10996 reflects Just Intonation or a very similar form of it, only one of each type each of 'perfect' fourth and fifth and 'pure' third and sixth occurs among the 14 number pairs given there.

8 Although Horowitz (2006) was the first to publish the tablet, it was known in print from the early years of the twentieth century when Hilprecht (1903: 530) published a photograph of it with the caption 'Astronomical Tablet from the Temple Library' (Friberg 2011: 128). Dumbrill (2005: 73–74) seems to have been the first to associate a star-form heptagram with tuning patterns for the harp or lyre.

9 During the course of Dumbrill's article it transpires that he does not envisage the heptagram itself as a dial, but as a drawing of, or a template for constructing, a dial (Dumbrill 2009).

10 Crickmore's point is that whereas the Ptolemaic tone-circle was a regular 12-pointed figure and therefore easily formed geometrically with a pair of compasses, the Late Babylonian heptagram on CBS 1766 was not regular (as can be seen on the tablet); regularity would have been necessary for the figure to be a tone-circle (Crickmore 2010: 19). The formation of a regular heptagram requires a knowledge of logarithmic mathematics which the Babylonians apparently did not have. A subsequent discussion of the related question 'Is CBS 1766 a Tone-Circle?' (de Rose 2016) founders on the same ground as far as its application to Babylonian antiquity is concerned.

11 Wulstan's reference to Laroche 1955 gives '1958' as the publication date. This may be a misprint: I have not been able to trace the reference to 1958.

12 The tablet h.6 is extant in three separate fragments which belong together. These are designated RS [= Ras Shamra] 15.30, 15.49 and 17.387. Each fragment had its own findspot, thus each one weathered differently, a feature that can be readily appreciated from good, natural photographs and hand drawings. See, for example, the

images in Dumbrill 2005: 115–116, 133 (the last word of the caption to the photograph on p. 116 should read 'Reverse'; the hand drawing on p. 133 seems identical with that in Laroche 1968).

13 Dumbrill 2005: 119 n. 1 wrongly gives the publication date and pagination of Duchesne-Guillemin's transcription as '(1982) 5–24'. The date of the publication in which the transcription appears is 1984; the transcription appears as Fig. 11 on p. 31. The transcription there is reproduced from Duschesne-Gillemin's 'Déchiffrement de la musique babylonienne', Accademia [nazionale] dei Lincei, *Quaderno* 236 (1977): 21, as stated in the caption.

14 The lady Pu-abi's harp, excavated from her grave in Ur, has 11 strings in its restored state (Woolley 1934: 74, 249; Pl. 108, 109). Owing to a misunderstanding about the spelling of Pu-abi's name, Woolley refers to her as 'Shub-ad'. The lyres excavated at Ur seem to have had from 10 to 14 strings, but as the remains vary considerably in their state of preservation, such details are often unclear.

15 What follows in this section draws heavily on Smith 2017a: 746–748.

16 The material results of Idelsohn's research appeared in his monumental collection of Near Eastern ('Oriental' in Idelsohn's terminology) synagogue chants published as a ten-volume thesaurus, first in German (= Idelsohn 1914–1932). The publication history of the thesaurus is complex; some volumes were also published in English. The first five volumes provide material for the early chapters of Idelsohn 1929.

17 The body height of four of the seven small bells ranges from 1.5 cm to 3.9 cm. Only the overall height (body plus suspension loop) is available for the three remaining small bells: 3.3 cm for each. See §5.2.3.3, n. 26.

18 Crickmore's article has several issues. His opinion that the Mesopotamian tablets may possibly contain the 'roots from which the ancient and sophisticated concept of the "harmony of the spheres" would eventually grow' (Crickmore 2013: Section 6.1), quoted above in the main text, is dangerously polemical, especially considering what the 'conventional thinking' about ancient Near Eastern music has made of ideas about heptatonicism, scales and octave species. Further, Crickmore's method is, like Wulstan's earlier, basically retrojective. However, it is disguised as projective by presenting the ancient Near Eastern evidence first. This is also part of the polemic. Finally, Crickmore admits in his Conclusion that much of the evidence he cites is 'circumstantial and dependent on musicological interpretation' and that it is possible that 'some of the assumptions of Western musicologists about implied tonality [on which much of his argument is based] may be partially anachronistic' (Crickmore 2013: Section 8). This comes after he has presented a vast array – one might almost say a superabundance – of evidence based on considerations of heptachords, the pitches of the *ishartum* tuning, tone (note) numbers, god-numbers, names of planets, ancient names of days of the week, and more (Crickmore 2013, including his Table VI). On this showing, a reader could be forgiven for having doubts about the validity of the views expressed. Nevertheless, Crickmore can still assert in the last clause of his article that the result of his enquiry 'suggests that the "harmony of the spheres," an idea whose origin is usually attributed to Pythagoras and Plato, may have originated in Babylon, a thousand years or more earlier, and may have arisen as part of an attempt by the Babylonian priest-mathematicians and their scribes to formulate a combined musical and early scientific and geocentric model of their universe.'

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Appendix

Selected ancient Hebrew (Hebrew Bible), Greek (Septuagint), Akkadian and Sumerian terms and related expressions referring to musical pipes, in transliteration and translation (related expressions are inset)[1]

Hebrew (Hebrew Bible)

Term in transliteration	***English translation***	***Biblical reference(s)***
ḥaliyl/ḥali-liym/ ḥaliyliym[2]	*(a)* flute(s) (NJPST; NRSV); pipe(s) (NIV)	*(a)* 1 Sam. 10.5; Isa. 5.12; 30.29; Jer. 48.36 (×2)
	(b) flutes (NJPST); pipe(s) (NRSV; NIV)	*(b)* 1 Kgs 1.40
ʿûgab[3]	pipe (NJPST; NRSV; NIV)	Gen. 4.21; Job 21.12; Ps. 150.4
weʿûgabiy	my pipe (NJPST); and my pipe (NRSV; NIV)	Job 30.31
neḥiylôt	(not trans. in NJPST); flutes (NRSV); pipes (NIV)	Ps. 5.Superscription
mashrôqiytaʾ	pipe (NJPST; NRSV); flute (NIV)	Dan. 3.5, 7, 10, 15

Greek (Septuagint) at the same biblical references as are given for 'Hebrew (Hebrew Bible)' above

Term in transliteration	***English translation (*NETS*)***	***Biblical reference(s)***	
aulos/aulōn/ aulou	flute/flutes/flute	1 Sam. 10.5; Isa. 5.12; 30.29	(HB *ḥaliyl*, etc.)
auloi … aulos	pipes … pipe	Jer. 31.36 [= HB 48.36]	(HB *ḥaliyl*, etc.)
no instrument named	*no instrument named*	1 Kgs 1.40	(HB *ḥaliyl*, etc.)
psaltērion	harp	Gen. 4.21	(HB *ʿûgab*)

(*Continued*)

(Cont.)

psalmou	melody	Job 21.12	(HB *ʿûgab*)
organō	instrument	Ps. 150.4	(HB *ʿûgab*)
psalmos mou	my melody	Job 30.31	(HB *weʿûgabiy*)
no instrument named	*no instrument named*	Ps. 5.Superscription	(HB *neḥiylôt*)
suringos	pipe [‘syrinx’ (?)]	Dan. 3.5, 7, 10, 15[4]	(HB *mashrô-qiyta᾽*)

Akkadian

Term in transliteration	***English translation***	***Source of transliteration and translation***
embūbu/ enbūbu/ ebbūbu	flute	ADOI (1958): 137–138, entry ‘embūbu’
embūb ḫašê	windpipe	*ditto above*
ša embūbi	flute player	*ditto above*
[…] *ebu-bi-im*	[lament (to the accompaniment)] of the flute	*ditto above*
šulpu [= Sumerian gi-DI]	stalk/cultivated field/flute or other reed instr.	ADOI (1992): 256–257, entry ‘šulpu’
ša šulpi	a reed-instrument player	*ditto above*

Sumerian

Term in transliteration	***English translation***	***Source of transliteration and translation***
gi-di [= Akkadian *šulpu*]	flute	*Inana’s descent to the nether world*, ETCSL 1.4.1, line 353
	reed-pipe	*Ninurta’s exploits: a šir-sud (?) to Ninurta*, ETCSL 1.6.2, line 617
gi-di-da	side flute	Dumbrill 2005: 348, citing Landsberger 1959: 47–9; and Landsberger and Civil 1967: 183
lu$_2$-gi-di-da-kam	flute player	*Proverbs: Collections 2 + 6*, Segment A, 2.54, ETCSL 6.1.02, line 90
lu$_2$\-gi-di-da-še	flute player	*Proverbs from Urim* [Ur], UET 6/2 267, ETCSL 6.2.3, line 6

(*Continued*)

(Cont.)

gi-gid$_2$	pipe		*Inana's descent to the nether world*, ETCSL 1.4.1, line 353
	flutes		*The cursing of Agade* [Akkad], ETCSL 2.1.5, line 36
	flute		*The death of Ur-Namma (Ur-Namma A)*, ETCSL 2.4.1.1, line 187
lu$_2$ -‹gi›-/gid$_2$ \-a-kam		piper	*Proverbs: Collections 2 + 6*, Segment A, 2.54, ETCSL 6.1.02, line 91

Notes

1 The Hebrew terms *sheriqôt* and *tsanterôt* in HB Judg. 5.16 and Zech. 4.12, respectively, and their Greek equivalents at the same references in the Septuagint (*surismous* and *muxōterōn*, respectively), which are often rendered 'pipe', 'piping' (verb and gerund) and 'pipes' (noun) in translations, are not included here since they do not refer to musical instruments. The first probably means 'bleatings' as of sheep in a sheepfold. The second may mean a pipe as a conduit for liquid. On the meaning of *tsanterôt* and *muxōterōn* in particular, see Wolters 2012.

2 Detailed discussion of the *ḥaliyl*, with drawings, in Kolyada 2009: 86–94.

3 Detailed discussion of the *ʿûgab* (*ʿûgav*), with drawings, in Kolyada 2009: 97–100.

4 Thus in the Greek translation of Theodotion (first century CE). The Old Greek (OG) translation specifies this instrument only in LXX Dan 3.5. See Rahlfs 1935 and NETS at Dan 3.5–15. On the instruments listed in HB and LXX Dan. 3.5–15, see Smith 2011: 111–12. For a detailed discussion of the *mashrôqiyta'/suringos*, see Kolyada 2009: 94–7.

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Index of Ancient Greek, Latin and Near Eastern words and phrases

Akkadian
apilum/apiltum 62
arkammi 35, 107, 132
assinnum/assinnu 62
ebu-bi-im 178
ellu 146n3
embūb ḫašē 178
embūbu/enbūbu/ebbūbu 178
ēribbīti 37
galgaturi 35, 107, 111, 132
gis galgaturi sagir 125n2
gushtum 49
ḫalḫallatu(m) 108, 118
ḫiylu 49
ḫuḫupal 35, 107, 132
huppûm 49
ilu(m) 136
ilūtu 136
išartum 160
kalū 37, 38
kalūm 37
kitash 35
maḫol 49
manzû 118
mashmashu 37, 146n2
mēlulu 49
muḫḫûm/muḫḫutum 62
nabû 62
nar 63
nargallum 138
niblu 100n1
pītum 160
raggimu/ragginto[-/u] 63
ša embubi 178
ša šulpi 178
šulpu 178

Arabic
al-ud 89, 90

Aramaic
lishkat lewaʾey 147
qarnaʾ 95

Egyptian
akhet 53n27
ḥm-nṯr 64
ḫnr/khener 50, 51, 132, 133, 139, 151
mnj.t/menit/menat 124
muu 50, 51, 139, 151
peret 53n27
sa/za // s₃/z₃ 146n10
shemu 53n27
sḫm/sekhem 118
sššt/sesheshet 117, 118
wʿb 64

Greek
aphistemi 170n1
aulos 98, 177
chordais 100n2
rhyton 101n9
stēlē 23n26

Hebrew
amah/ammatayim/amôt 22n16
bamôt/bamah 17, 19, 23n25, 23n26, 23n30
elohim/elohiym 4, 21n5, 52n10
kinnôr 42, 51n4, 54n36, 84, **85**, 132
kisʾaka 52n10
menaʿane ʿiym 114, 117
minniy/minniym 34, 84, **85**, 89
nabiy 63, 77n2
nebel 42, 60, 84, **85**, 89, 100n1, 146n7
nenagen/nagan/nogeniym 43, 51n4, 54n36, 61
paʿamon/paʿamoniym/paʿamoney 119
qeren 67, 95

shalishiym 117
sham 52n9
shiyr/shirah 62
shofar 42, 64, 67, 95, **133**
tof/tôfefôt/tuppiym 43, 106
ûgab 98
zammerû 47

Hurrianised Akkadian
išarte 160

Latin
excelsus 23n26
gazofilacia cantorum 147

Sumerian
ala/á-lá 36, 44, 107, 108, 109, 125n3, 132
balang/balaĝ 36, 37, 44, 70, 107, 108, 109, 125n4, 132, 146n3
^{dingir}ub/^{d}ub 136
en$_3$-du 78n9, 78n10
en$_3$-du-bi 78n9
gala 36
gala māhum/galamāhum 37, 138
gi-di 98, 178
gi-di-da 98, 178
gi-gid$_2$ 179
ğipar 72
GIŠTIBULA (SÀ.A.TAR) 90
gudug 72
ku/kug 146n3
lilis/lilissu 36, 37, 108, 126n5, 132, 137, 146n3
lu$_2$-gi-di-da-še 178
lu$_2$-\<gi>-/gid$_2$\-a-kam 179
lu$_2$-gi-di-da-kam 178
meze 118, 132
nar 63
nar gal 138
pashesh 36, 125n5, 146n2
šem 108, 118, 132
shir-sud/šir-sud 37, 69, 70, 78n17, 98
sim/si-im 36, 108, 125n3
šir-namursaĝa 37, 126n5
tigi/TIGI 36, 98, 107, 108, 110, 132, 135
ub 36, 37, 70, 108, 126n5, 132, 146n3

General index

Page numbers in italic refer to figures.
Page numbers in bold refer to tables.

Aaron 59, 142
Abd el-Gurnah (Sheikh) 54n37
Abd el-Qurna (Sheikh) 99, 125n1
Abner 65
Abraham 7
Abydos 46, 51, 53n23, 54n41, 75
Acco 111
Acemhöyuk 114
acrobatic dancers 49
Adab 44
Admonitions of an Egyptian Sage 75–77, 79n27
aerophones *see* lip-vibrated wind instruments; reed-vibrated and edge- and end-blown pipes
Agushaya (deity) 49, 55n47, 55n48
Ain Dara 11–12, 23n21
Akhenaten 21n2, 40, 53n25
Alexander the Great 151
Alishar 126n16
allegory of war: Ipuwer's 'Admissions' 75–77, 79n27
almug wood 140
altars: for incense 17; Jerusalem Temple 10; sacrificial 6, 7, 17, 18, 19
Amarna 40, **115**
Amarna correspondence 5, 22n9
Amenemhat III 139
Amenhotep II 54n37
Amenhotep IV 21n2
Amman 7
Amos (HB) (prophet) 31, 51n1, 59, 66, 67, 141
Amun (deity) 21n2, 39, 45
Amun-Re (deity) 14, 15, 16, 40
Anat (deity) 4
Anatolia 1; astrology, cosmology and music 169; close association of court and temple 137; deities 3, 5, 19; mantic traditions and music 61–62; music at liturgies and rituals 35–36; music and cultic dance 48; music in processions 43–44; music and warfare 68; open-air cultic installations 19; religion 5, 6, 7; temples 5, 8, 12–13
Anatolia, musical instruments: bells 120; cymbals 111; divinisation 136; drums 107; groups and ensembles 134; horns 95; lutes 89, 90; pipes 100; rattles 114; sistrums 118
ancestor worship 5
ancient Near East 1–2; religion 2–7; spatial settings of cultic activity 7–21; *see also* Anatolia; Egypt; Israel; Levant; Mesopotamia
animal horns 67, 68, 94, 95, 152
animal sacrifice 6, 7, 18, 37, 40, 90, 137
Anput/Input (deity) 22n10
Anshan 21
Antefoker 51
anthropomorphsim 2
apotropaic properties: musical media 68, 119, 120, 151–152
Arad 4
Aratta 69, 70
arch-shaped sistrums 118
Argishti I 121, 122, 126n18
Argishti II 122
Ark of the Covenant/Ark of God 10, 42, 46, 113

Armenia 120, 121
Ashdod 111
Ashera 5
ʿasherah/Asherah (deity) 4
asherah poles 17
Ashkelon 4, 7
Ashurnasirpal II 122
Assur 14, 111
Assurbanipal 138
Assyria 44, 62, 63, 138
Astarte (deity) 5
astrology 63, 159, 168–169
astronomy 159
Aten (deity) 3, 21n2, 40, 53n25
athletics: cymbals associated with 111
The Autobiography of Weni 75
Ay (deity) 40
Azatiwataya 43–44

Baal (deity) 4, 5, 22n8, 48
Babylon 13, 37, 82, 172n18
Babylonia 123, 164; *see also* Late Babylonian period; Neo-Babylonian period; Old Babylonian period
Babylonian harp 169
Babylonian music 162–163
Babylonian tablets 154–155; CBS 1766 159, 161, 162, 168, 169, 171n3; CBS 10996 155, 156, **156**, 157, 158, 159, 161, 170n3, 171n7; KAR 158 158m 171n3; music theory in 155–159, 170; U.3011 (Nabnītu 32) 155, 156, 162, 168, 170, 171n3; UET VI/3 388 170n3; UET VII 74 (U.7/80) 156, 158, 159, 162, 170n3; UET VII 126 155, 159, 168, 170, 171n3; YBC 11381 155, 157, 161, 162, 169, 171n4
bark chapel (Khonsu) 15
barrel-shaped drums 107–108
Bastam 126n16
Bastet (deity) 118
battle: hymns 64; shouts and songs 64, 67, 68, 69, 82; stories 59, 69; summons 64, 68, 69, 74, 151
Bayer, Bathja 84
baʿal (deity) 4
Beautiful Festival of the Valley 40, 45, 50, 54n38
bells 119–124, 126n16; apotropaism 152, 169; archaeological remains 119–120, 122; pitch 167–168; shapes 124; use in warfare 69
Beni Hasan 99
Bes (deity) 5
Beset (deity) 5
Beth-shean 4, 92
Bethel 18, 23n30
bird-shaped rattles 114, 115, **115**
black-headed people 52n17
blind musicians 138
bone pipes 96, 99
Book of Moses 143
brass instruments: bells 123; pipes 102n14
Braun, Joachim 35, 84, 89, 92, 95, 111, 112, 114, 118, 120, 126n10, 126n11
Brison, Ora 48, 89
broadrooms 13, 14, 15, 22n18
Bronze Age 1; *see also* Early Bronze Age; Late Bronze Age; Middle Bronze Age
bronze instruments: bells 121, 122, 123, 124; cymbals 110, 111; drums 108; pipes 102n14; trumpets 92–93, 94
bugles 94
The Building of Ningirsu's Temple 9, 36, 44, 109, 110, 135
bull imagery 22n8
Bullbutu 138
Burgh, T.W. 84
burial chambers 8, 45, 92
burnt offerings 7, 31, 42, 92, 132, 142, 143

Cairo 99
calf images: worship of 4, 22n8, 47–48
cantillation 163, 164, 165
Carchemish 68, 78n14, 89
Carter, Howard 92, 93, 101n7, 101n8
Cassius Dio 156, 169, 171n5
castanets 42
Castellucia, Manuel 120, 123, 127n23
castrato 82
Caubet, Annie 35, 84, 100n1
ceramic instruments: cymbals 110; rhytons 101n9
ceremonial trumpets 93, 94
Chantress of Osiris 45
Chantress in the Temple of Amun 45
chantresses 45, 134, 146n2
chants/chanting 41, 61, 70, 75, 144, 151, 163, 164, 172n16
Charlesworth, James H. 24n33
Chemosh (deity) 4
Chenaniah 143
Chief Lamenter 138
Chief Music Instructor 138
Chief Musician 138
Chief Trumpeter 139
chieronomy 153–154

child sacrifice 7
chordophones (stringed instruments) 83–91, 142; apotropaic properties 152; at liturgies and rituals 34, 37; and dance 48; motivic structure 168; *see also* harp(s); lute(s); lyre(s)
Chronicles (HB) 22n15, 64, 65–66, 135, 139–140, 143, 144
civic processions 41
clappers 112; apotropaism 152; in groups and ensembles 132, 133; hinged 113; open cage bells with 119; paired flat 112–113; use in cultic activities 35, 45
clarinette 102n16
clashing instruments *see* cymbals
Colburn, Jerome 159, 162, 168
colophon 160
combat: dance in imitation of 49
communal meals: post-sacrificial 19
communal worship 32, 33
community bonding 7
conch horns/trumpets 35, 95
conventional thinking: of Babylonian music theory, issues with 161–163
Cook, Stephen 135, 136, 144
copper instruments: bells 122, 123; cymbals 110; drums 108; trumpets 92–93, 94
Copts/Coptic period 102n15, 126n7
cores (trumpet) 93
cosmology 63, 168–169
court: close association of temple and 137, 138–139, 140
Crickmore, Leon 154–155, 157, 159, 169, 170n2, 170n3, 171n10, 172n18
crotals 48, 68, 113
cult objects *see* sacred images
cultic activity: and associated music 30–51; and musical instruments *see individual instruments*
cultic places 31, 32, 33, 134; open-air cultic installations and other sacred structures 7, 16–21; *see also* temples
cultic shouts 32, 33, 42
culture: religion as 2–3
cuneiform texts: laments for cities 70; *see also* Babylonian tablets; Gudea Cylinders; Ugarit tablets
cylindrical drums 107–108
cymbals 107, 110–112, 125n2; apotropaic function 152; at liturgies and rituals 35; and dance 47, 48; in Jerusalem Temple 135; use in processions 42, 43, 133, 134; in prophetic ministry and 62; temple groups 132; use at sacrifices 142–143; use in warfare 69; *see also* crotals
cypress wood instruments 42, 54n34, 113
Cyprus 21, 24n36

Dan 17–18, 23n29, 89
Dan, Roberto 120, 123, 127n23
dance: instruments associated with 89, 95, 100, 111, 117, 151; music and 42, 46–51; warfare, victory and 68, 70
dancers: acrobatic 49; Egyptian 134, 139; female 50–51, 65, 117; male 50, 51
David (biblical) 32, 42, 47, 65, 72, 132, 143, 144, 152, 170n1
Day, John 51n5
Dead Sea Scroll 23n33, 54n34, 147
Deborah (prophetess) 60
Deir el-Bahri 45, 54n38, 90
Deir el-Bakhit 99
Deir el-Medina 99
deity(ies) 2, 3–6, 10, 19; animal sacrifices as food for 6; care for 7; discovery of red-painted arm 4; hymns to 36, 38, 39, 40; libations of wine as drink for 6; musical media associated with 145; myths and traditions 2; and norms of conduct 2–3; obeisance 8; prophetic ministry and affirmation of messages from 60; regarded as superhuman 2; songs in praise of 34, 64, 146n1; and warfare 59; *see also* god-numbers; *individual deities*
Deuteronomy (HB) 18, 24n33, 48, 77n4, 142
diatonic scales 27n24, 157, 161, 162
divination 61–62, 63, 64, 77n1, 111, 134
divine commands 31
divine will: prophetic ministry and knowledge of 60
diviners 61–62, 63
divinisation 3, 136–137
Dizginkale 121, 122
Djehuty/Djehutyemheb 45, 54n37
double-tube pipes 68, 97–98, 99
drama 151
dream interpretation 63, 77n4
drums: apotropaic function 152; barrel-shaped and cylindrical 107–108; in cultic contexts 125n5; and dance 48; designation **balaĝ**/**balang** 108–109; divinisation 137; hourglass-shaped 107; large 108; methods of playing 109; pitch 167; in prophetic ministry 62; sound of

109–110; temple groups 132, 133; use at liturgies and rituals 36, 37, 132; use in processions 43, 44, 45, 133, 134, 169; use in warfare 69, 70, 72, 73; *see also* hand drums; kettledrums; slung drums
drumsticks 109, 110, 126n6
Duchesne-Guillemin, Marcelle 154, 161, 171n13
duct flutes 96
Dumbrill, Richard J. 52n13, 91, 98, 101n10, 125n2, 159, 160, 161, 162, 163, 168, 171n8, 171n9, 172n13
Dumuzid's Dream 63

Ea (deity) 36, 38, 49, 90
Ea-creator 155
Early Bronze Age 18, 107, 118
Early Dynastic Period (Mesopotamia) 138
earthenware rattles 114, 115, 126n10
ecstasy 60
edge-blown flutes 96
egg-shaped rattles 114, **115**
Egypt 1; attitudes to death and burial 54n32; influence in the Levant 5; instrumental sound 153–154; mantic traditions and music 64; music at liturgies and rituals 39–41; music and cultic dance 49–51; music in processions 45; music and warfare 72–77; organisation and administration of music 138–139, 143; pyramids 8, 20; religion 3, 5, 6, 7; religious calendar 53n27; temples 7, 8, 14–16, 19–20, 45, 72, 79n22, 94; wailing over 67
Egypt, musical instruments: bells 123, 167; clappers 112–113; cymbals 111–112; divinisation 136; drums 107; groups and ensembles 132, 134; lutes 89, 90, 91; magical and prophylactic properties 152; menats 124–125; pipes 96, *97*, 98, 99, 100; rattles 115; sistrums 118; trumpets 93
el-Mahasna **115**
ʾel /El (deity) 4, 5, 18, 22n8
Elam 1, 8, 20–21, 70, 100
An elegy on the death of Nawirtum 69, 71
Elephantine 112
Elijah (prophet) 48, 55n43, 60
Elisha (prophet) 60, 63
Emar (deity) 44
Emmerkar 69, 70
emotion: music and 71
enclosed rattles 113–117, 152
end-blown flutes 91, 96, 97, 99, 132; and dance 47; in large- and small-scale processions 133, 134; *see also* flautists; flutes; syrinx
Engel, Carl 123
Enki (deity) 39
Enki's journey to Nibru 109
Enlil (deity) 13, 39
Enmarch, Roland 79n27
Enmerkar 69, 70
Enmešarra (deity) 169
enneatonic/enneatonicism 162, 163
Eridug 70
Eshnunna 44
Eshtar (deity) 37
Etemenanki (deity) 13, 23n24
The exaltation of Inana 69–70, 72
Exodus (HB) 24n33, 48, 142
Ezekiel (HB) (prophet) 10, 22n16, 59, 61, 67, 135, 136, 144, 146n6, 147n12

faïence instruments 126n8; bells 119, 123; cymbals 112; menats 125
feeding rituals 7
Festival of the Warrior-God 35, 132
festivals: music and dance at 33, 35, 40, 45, 46, 49, 50, 51; prostitution at 3; use of trumpets at 94
finger holes: conch horn/trumpet 35; flutes and pipes 91, 95, 96, *97*, 99, 100
First Isaiah 31, 43, 141
First Temple period 10, 31
flautists 153, 154
flutes 96, 98; in cultic activities 37, 42, 43, 60; *see also* end-blown flutes; flautists; syrinx
frames: hand drums 106; harps and lyres 86, 87; sistrums 117
Franklin, John Curtis 137
frenzy 42, 50, 60
Friberg, Jöran 159
friezes: depicting lutes 89; depicting music in processions 43
fruit-shaped rattles 114, 115, **115**
functional activity: sound as integral to 151
funerary rites: instruments played at 90; music, singing and dance at 35, 37, 41, 45–46, 48, 50, 51, 112; musical groups and ensembles 132

Gabbay, Uri 118
Genesis (HB) 18
Gestin-ana 109

Gezer 17, 18, 23n29
Gibeath-elohim 42
Gilat 107
Gilgamesh 69
Giza 96, 115
goats' horns 95
god-numbers 91, 166, 172n18
gold bells 119, 122, 123, 124, 152
'golden calf' narrative 47–48
grass rattles **116**
Greek(s): concept of music 151; music notation 161–162; theory of pitch 156, 157
groups and ensembles (music): introduction 131–132; in large-scale liturgies and rituals 132; in large-scale processions 133; in small-scale rituals and processions 133–134; standard 131
Gudam 69
Gudea 36, 44
Gudea Cylinders 9, 22n14, 36, 44
guilds 146n10
Gurney, Oliver R. 154, 170n3
Güterbock, Hans G. 160

Habakkuk (HB) (prophet) 59
Hacilar region 114
Haifa 113
Haldi (deity) 19
hand drums 106–107; at liturgies and rituals 33; and dance 47, 151; in prophetic ministry 60; relief depicting *86*; use in processions 42, 43, 44, 45, **133**; use in warfare 64, 65, 70
handclapping 50, 112, 132
harmonic series 167, 168
Harmonics 159
'harmony of the spheres' 156, 157, 166, 169, 172n18
harp(s) 84, 100n1; apotropaic properties 152; at liturgies and rituals 33, 35, 36, 39, 41, 141; Babylonian 156, 169; consequences of structure for tuning 87–88; and dance 47; in Jerusalem Temple 135; miniature 90, 152; numbering of strings 162; playing methods 88–89; in prophetic ministry 60; Pu-abi's 172n14; structural features 84–87; temple groups 132; tuning 166, 167, 170; use in processions 42, 44, 45, **133**, 134; use in warfare 69, 70
harpists 53n24, 70, 153, 154, 157
Hathor (deity) 118, 125
Hatshepsut, Queen 45, 54n38
hatsotserôt see trumpets
Hattusa 5, 12
hautbois (oboe) 99, 102n16
Hazor 10, 35
Head Singer 138
Hebrew Bible (HB): building of temples 9; descriptions and references to deities 3, 4, 7, 21n6; descriptions and references to musical instruments 84, 92, 98, 106, 111, 113, 114, 117, 119, 120, 177; mantic traditions and music 59–61; music at liturgies and rituals 30–35; music and cultic dance 46–48; music in processions 41–43; music and warfare 64–68; musical media groups and ensembles 133, 134, 135; organisation and administration of music 140; uncertainty surrounding evaluation and interpretation of texts 147n12; vocal music 163; *see also individual books*
Hebrews: child sacrifice 7
Hellenikon 8
Hellenisation 151
Hellenistic period 2, 120
heptachords/heptachordalism 127n24, 156, 172n18
heptagram 159, 162, 169, 171n3, 171n8, 171n9, 171n10
heptatonic/heptatonicism 157, 161, 162, 163, 172n18
herald 69
heroic dead: honouring/mourning of 70, 71
Hetpet 96
Hezekiah 31, 141, 144
Hickmann, Hans 90, 91, 99, 100, 101n7, 102n14, 102n16, 110, 111, 116, 117, 123, 124, 125n1, 126n7, 126n12
hieroglyphs: military musicians 139; music and warfare 72, 75; trumpets 94; use of music at liturgies and rituals 39, 40
high places 17, 18, 19, 20, 21, 23n26, 23n30, 32, 33, 42, 60
high priests: Jerusalem 119, 120, 124, 152
hinged clappers 113
Hiram 140
Hittite: deities 5; monarchy 35; music 162–163
horns 91, 92, 94–95; at liturgies and rituals 33, 35; hunting 94, 168; pitch 167; use in processions 42; use in warfare 67, 68, 69, 151
Horowitz, Wayne 159, 171n8

horse bells 69
Horus (deity) 51
Hosea (HB) (prophet) 59
hourglass-shaped drums 107
Huldah (prophetess) 60
human sacrifice 7
human voice 82–83, 133, **133**, 151; *see also* vocal music
Hundley, Michael 8, 9, 12
hunting horns 94, 168
Hurrian Hymns 36, 160, 161, 162, 163
Hüseyindede 43, 89
Hymn to Ḫendursanga 69, 78n15
hymns: at sacrifices 37; to deities 36, 38, 39, 40, 69–70; to kings and rulers 34, 38–39, 40–41, 141; *see also* Kesh Temple Hymn
Hymns to King Senusret III 40–41, 53n30, 54n30, 54n31

Iabtina 99
iconographies: bells 120; cymbals 111; deities 2; drums 106, 107, 109; harps and lyres 86; horns 95; instruments associated with dance 151; lutes 89, 91; music at liturgies and rituals 39; music and dance 49, 51; music in processions 43, 44; music and warfare 69, 72; musical groups and ensembles 131; pipes 97–98; sistrums 117, 118
Idelsohn, A.Z. 164, 172n16
idiophones 152; clapping instruments 112–113; clashing instruments 110–112; shaking instruments 113–125; *see also* sistrums
idolatry 47, 48
Ikhernofret stela 54n41
Inana (deity) 37, 38, 52n17, 69, 70, 98
Inana-mansum 138
İnandıktepe 43, 89
Inanna (deity) 13
incantation bells 123, 152
instrumental music: idiom of 152–163
intimidation rituals 67, 68, 152
involuntary vocal sounds 82
Ipuwer 75–76, 79n27
Iraq 13, 111
Iron Age 1, 2, 3, 4, 10, 11, 39, 99, 100
Isaac 7
Isaiah (HB) (prophet) 31, 32, 43, 51n2, 51n4, 59, 60, 77n3, 141
ishartum tuning 172n18
Ishme-Dagan 38, 53n20, 109
Ishtar (deity) 36, 49, 169
Ishtar-Kitītum (deity) 13
Isis (deity) 112
Israel: mantic traditions and music 59–61; music at liturgies and rituals 30–35; music and cultic dance 46–48; music in processions 41–43; organisation and administration of cultic music 139–145; religion 3, 6; subordination of kings to deities 3; warfare and music 64–68
Israel, musical instruments: bells 119, 120; cymbals 111; divinisation 136; horns 95; rattles 114; sistrums 117; trumpets 93
ivory clappers 112
ivory tablet: illustrating warfare and music 67

Jebel Aqra 19
Jehoshaphat 64
Jephthah 7, 65
Jeremiah (HB) (prophet) 59, 66, 67
Jeremiah's lament 65
Jericho, Battle of 67, 78n13, 95, 152
Jerusalem: high priests 119, 120, 124, 152; lamentation over destruction of 66; *see also* Zion
Jerusalem Temple 9–10; deity worshipped at 3; Ezekiel's vision of 22n16, 135; groups and ensembles 132; instrument rooms 135–136; music at liturgies and rituals 31, 32, 33, 34; music in processions 43; musical instruments 135, 146n1, 146n2; musicians 143; organisation and administration of music 140, 141; processions, description of 142; sacrifices 6; use of bells 119, 152
jingle bells 119
jingles 118
Jonathan (biblical) 65, 72
Joshua (HB) (prophet) 18, 23n28, 60, 67, 95, 152
Josiah 65, 144
joy: music and dance 47, 49
Judah: divinisation of instruments 136; mantic traditions and music 59–61; music at liturgies and rituals 30–35, 95; music and cultic dance 46–48, 95; music in processions 41–43, 95; music and warfare 64–68, 95; organisation and administration of music 139–145; religion 3, 6

Judges 60
Just Intonation 157

Kar-Tukulti-Ninurta 14
Karana 13, 14
Karmir Blur 121, 126n18
Karnak 14, 15, 16, 39, 45
Kawa 94
Kelim 136
Kesh Temple Hymn 36, 52n15, 109, 110, 125n5, 146n2
kettledrums 37, 108, 109, 111, 146n2
Khoiak 54n40
Khonsu (deity) 14–15, 45
Kilmer, Anne Draffkorn 154, 161, 171n3
Kings (HB) 9, 31, 42, 48, 55n43, 60, 61, 63, 140
kings and rulers: hymns to 34, 38–39, 40–41, 141; organisation and administration of cultic music 137, 139; perceived as embodiment of the divine warrior 35; subordination to the deity, Israel 3; *see also individual kings and rulers*
Kolyada, Yelena 117, 119
Konya-Karahöyük 36
Kültepe 114
Kuntillet ʿAjrud 4, 5

Labaya 5
Lachish 5
Lahun 40, 51, 139
Lamaštu 123
lamentation 30–31, 45, 65, 132, 138
Lamentations 66
lamenters 37, 38, 82–83, 138, 152
laments 61, 65–66, 68, 77, 109, 145, 152; for cities 38, 53n18, 66–67, 70; for the defeated 65, 70, 71–72
The Lament for Nibru 135
The Lament for Urim 38, 53n18, 70, 126n5
large drums 108
large temples 9
large-scale liturgies and rituals 132
large-scale processions: groups and ensembles 133
Laroche, Emmanuel 160, 171n11
Larsa 49, 111
Late Babylonian period 161, 171n3
Late Bronze Age 3, 4, 5, 10, 11, 111
Late Middle Bronze Age 4
Late Period Egypt 112, 118, 124
Late Period Memphis 139
Layard, Austen H. 122, 123, 127n20, 127n21
Levant 1; Egyptian presence 5; music at liturgies and rituals 30–35; music theory 161; open-air cultic installations 17–19; religion in 3–5; shrine models 21; temples 9–12; warfare and music 64–68
Levant, musical instruments: bells 120; conch horns 95; cymbals 111; divinisation 136; drums 107; instrumental sound 153, 154; lutes 89; natural horns 92; pipes 98, 99; rattles 114; sistrums 118; trumpets 92
Levantine tablets 158
Levi 136
Levites 63, 135, 143, 144
Leviticus (HB) 77n4, 142
libations 6, 21, 101n9, 137
Lichtheim, Miriam 76, 77, 78n11, 79n28
Ligourio 8
limping dance 48
lip-vibrated wind instruments 91–95; *see also* horns; trumpets
lishkah 7, 17, 19
lishkôt 135
little bells 120
liturgies: groups and ensembles in large-scale 132–133; instruments played at 95, 100, 111; music at 30–41
long trumpets 94
longrooms 10, 12, 22n18
Lugal-igi-ḫuš *see* Red-Eyed Lord
Lugalbanda in the Mountain Cave 69
lute(s) 84, 89–90, 100n3; and dance 48; miniature 90, 152; playing methods 91, 101n4; structural features 90–91; temple groups 132; tuning patterns 91; use in processions 43, 45; use in warfare 68
Luxor 15, 45, 54n37, 99
Luz 18
lyre(s) 83–84; apotropaic properties 152; asymmetrical 87, 88, 162; consequences of structure for tuning 87–88; and dance 47; from Ur 172n14; imported into Egypt 53n24; in Jerusalem Temple 135; playing methods 88–89; string numbering 162, 169; strings of the Babylonian 156, 157; structural features 84–87; symmetrical 87, 88, 162, 170; temple groups 132; tuning 166, 167, 170; use at liturgies and rituals 31, 32, 33, 35, 36, 39, 41; use in processions 42, 43, 44,

133; in prophetic ministry 60, 61, 62; use in warfare 67, 69, 70
lyrists 157

magical powers: instrumental sound 151–152
magical properties: musical instruments 68
magical rituals 61
Manniche, Lise 73, 94, 102n16, 112
mantic traditions: and music 59–64
maqām procedure 158
Marduk (deity) 13, 38
Mari 37, 49, 62, 63, 132, 138
mathematics 63, 159, 166, 171n10
mausoleums 8
Medinet Habu 15, *16*, 72, 73, 79n22
Mediterranean 7, 12, 19, 36, 119, 151
Megiddo 4, 18, 67, 111
Meir **116**
melodic style 164, 166
membranophones *see* drums; tambourines
Memphis 139
menats 45, 124–125, 152
Menua/Minua 122
Meret (deity) 79n29
Merimde **115**
Mesha Stele 23n27
Mesopotamia 1; astrology, cosmology and music 169; astronomy, mathematics and music 159; close association of court and temple 137; mantic traditions and music 62–63, 78n6; music at liturgies and rituals 36–39; music and cultic dance 49, 55n45; music notation 163; music in processions 44; music theory 161; music and warfare 68–72; organisation and administration of music 138, 143; pyramids 8; religion 5–6, 7; temples 8, 9, 13–14; urban culture 19; ziggurats 20
Mesopotamia, musical instruments: bells 122–123; cymbals 111; divinisation 136, 137; drums 107, 108; harps 166, 170; horns 95; instrumental sound 153, 154; lutes 89, 90; lyres 166, 170; pipes 98, 99, 100; rattles 114; sistrums 118; temple groups 132; *see also* Babylonian tablets
metal instruments: bells 126n15, 167–168; horns 95; pipes 96; trumpets 31, 92, 94, 101n5, 142, 152, 169; *see also* brass; bronze; copper; gold; silver
Micah (HB) (prophet) 59
microtonal intervals 165, 167
Middle Bronze Age 4, 5, 18, 22n9
Middle Kingdom 16, 22n9, 39, 41, 45, 46, 53n24, 54n41, 74, 79n22, 79n27, 100, 112, 139, 152
Middot 135
Milcom/Molech (deity) 4, 7, 21n6
military life: music and Egyptian 72
military musicians 139
Miller, Patrick D. 22n8
Min (deity) 51
miniature chordophones 90, 152
Mirelman, Sam 71, 107, 126n6
Miriam (prophetess) 60, 65
Mishnah 135, 136
Moab 17
modes 158, 160
monarchy *see* kings
monodic style 164, 167
monolatry 3
monotheism 3, 136
Mont (deity) 74
Montagu, Jeremy 92, 101n8
mortuary temples 7, 15, *16*, 41, 72, 79n22
Moses 47–48, 59, 64, 141
mother goddess 19
motivically structured vocal music 164, 168
Mount Carmel 48
Mount Ebal 18, 24n33
Mount Gerizim 18, 24n33
mountains: sacred 19, 20
mourning 31
mourning women 66
music: astrology and cosmology 168–169; at liturgies and rituals 30–41; concept of 150–152; and cultic dance 46–51; mantic traditions and 59–64; instruments *see* musical media; organisation and administration 137–145; in processions 41–46; and warfare 64–77; *see also* instrumental music; vocal music
music instruction fragments: from Nippur 162
Music and Musicians in Ancient Egypt 73
music notation 36, 124, 127n24, 153, 154, 155, 160, 161, 162, 163, 164, 165, 167, 168, 171n7
music theory 166; Babylonian tablets 155–159, 170; Ugarit tablets 160–161, 170
musical intervals 157, 158, 159, 165, 166, 167, 168
musical media: adorning necklaces 124, 125; aerophones, lip-vibrated 91–95; aerophones, reed-vibrated and edge-and

end-blown pipes 96–100; apotropaic properties 68, 119, 120, 151–152; chordophones 83–91; general introduction 83; groups and ensembles 131–134; idiophones 110–125; membranophones 106–110; organization and administration 137–145; sanctity and divinisation 134–137, 145; *see also individual instruments*
musical sound-world 150–172; concept of music 150–152; idiom of instrumental music 152–163; idiom of vocal music 163–165; magical powers 151–152; *see also* pitch; sound quality
musicians: Egyptian military 139; female 45, 90, 112; Jerusalem Temple 43, 143; Mesopotamia 138; *see also* flautists; harpists; lyrists
musicology 152–153, 153–154, 154
Mut (deity) 39, 45
mystical-spiritual dialogue 145
mythological texts: drum playing 109; music at liturgies and rituals 36, 37; music and dance 49; music and warfare 69, 70; pipes 100
mythology: astrology and cosmology 63; ritual re-enactment 37, 151

Nahum (HB) (prophet) 59
named instruments 137
Nanna (deity) 39, 70, 109
naos-shaped sistrums 117, 118
Nathan (prophet) 59
natural horns 33, 35, 91, 92, 95
Nawirtum 69, 71
Nebuchadnezzar II 13
Neferhotep I 45
Neferhotep II 54n39
Neferty 78n11
Negev 4, 107
Nehemiah (HB) 101n5
Nenkheftka 96
Neo-Babylonian period 1, 155, 158, 161, 171n4
Nephthys (deity) 112
Neribtum 13
neumes 158, 160
New Kingdom 14, 16, 40, 45, 50, 90, 99, 139
New Year celebrations (Babylon) 37
ney/nay 96, 99, 100
Ngeshtin-ana (deity) 39
Nibru 70, 71, 110
Nimrud 122, 123, 124, 127n21
Nineveh 13, 70, 100, 127n21
Ninĝišzida's journey to the nether world 71–72
Ninlil (deity) 39
Ninmakh 13
Ninmakh (deity) 13
Ninurta (deity) 37, 69, 70, 78n17, 98
Nippur 162, 168
Nisaba (deity) 39
Noadiah (prophetess) 60
Nouvel Empire 99
Numbers (HB) 31, 141, 142

octave species 157, 161, 162
Old Babylonian period 37, 38, 114, 138, 155, 158, 161
Old Kingdom 40, 50, 96, 132, 139
omens 77n1
open cage bells 119, 121
open-air cultic installations and other sacred structures 7, 16–21
Opet Festival 45, 50, 54n38
Ophir 140
oracles 31, 62, 63
organology 152, 153
Oshakan 121
Osiris (deity) 45, 46, 50, 51, 54n40
Oumel el-Bareigat **116**

paired flat clappers 112–113
Palestine 111, 114, 117, 119, 120
palindromic string numbering 168, 170
panpipes 96
papyrus manuscripts: music at liturgies and rituals 39, 40, 53n30; music and dance 51; music and warfare 72, 79n27; organisation of cultic music 139
Pasherenmut 139
Patnos 122
Payne, Elizabeth B. 155
percussion instruments *see* membranophones
perfect intervals 157
performative activity: sound as an essential element of 151; *see also* dance; rites; rituals
Persia 164
Persian period 2
personalisation of instruments 137
pharaohs 139
Phoenicia 1, 7
Phrygia 19

phyles 139, 146n10
pie-shaped rattles 114
pipes 96–100, 102n13; at liturgies and rituals 35, 37; and dance 48, 151; pitch 167; terms and expressions relating to 177–179; use in processions 42, 43, **133**, 134; use in prophetic ministry 60; use in warfare 68
pitch(es), instrumental 153–154; association with planets and days of the week 169; Babylonian tablets 157–159; Babylonian and Hittite music 163; bells 124, 127n24, 127n25, 167–168; cymbals 111; drums 167; harps 87, 162, 166, 167; horns 167; lyres 87, 88, 156, 162, 166, 167; menats 125; notation 124, 147n24; pipes 167; trumpets 35, 94, 167
pitch, vocal 82, 164, 165
Planets, Heptachords and the Days of the Week: The Harmony of the Spheres 169
plant material: rattles made from 116–117
Plato 156, 169, 171n5, 172n18
plucked-string instruments *see* chordophones
poetry 31, 32, 36, 37, 49, 109, 144
polytheism 3, 4, 136
post-sacrificial communal meals 19
praise: hymns and songs of 34, 64, 146n1; temple groups 132
predictive prophecy 78n11
processions: at Jerusalem temple 142; civic 41; dance as an element at 50; groups and ensembles in 133–134; instruments played in 89, 95, 100, 111, 112; music in 41–46, 67, 70; religious
profane 3
prophets/prophecy 59–60, 77n1, 77n2; female 60, 77n3; gifts 60; laments 66; musical media groups 133, 134; predictive 78n11; prophetic/oracular utterances 60, 61, 62, 63, 64, 134, 152; use of cymbals in 111
prophylactic properties: instrumental sound 120, 152
prostitution 3
Provenza, Antonietta 170n1
proverbs: music and prophetic utterances 63
Psalms (HB) 32, 33, 34, 43, 47, 51n5, 52n6, 52n8, 52n9, 52n10, 78n12, 84, **85**, 111, 141, 142
psaltery 84, **85**
Ptolemy, Claudius 159, 162
Pu-abi 172n14
purification 8, 21
pyramid texts: indicating musical activity 41
pyramids 8, 20
Pythagoras 157, 161–162, 166, 169, 172n18

Qur'an 164

Ra (deity) 39
Ramah 24n34
Ramesses III 15, *16*, 72, 73, 79n22
Ramos 46
Ramose 40
rams' horns 95
random parallel intervals 165
Ras Shamra *see* Ugarit
rattles 42, 113–117, 133, **133**
Red-Eyed Lord 36, 52n16, 137
reed-vibrated and edge- and end-blown pipes 96–100; archaeological remains 98–100; definitions 96; identification in ancient written sources 98; identification in iconographic sources 97–98; use in cultic contexts 100; *see also* pipes
reedpipes 91, 96, 97, 97–98, *97*, 99, 132, 133
reliefs: music at liturgies and rituals 41; music and dance 48, 49–50; music in processions 43, 44, 45; music and warfare 68, 69, 70, 72, 73–74; musical instruments *86*, 89, 90, 100, 111, 112
religion 2–7
religious processions 41
Reshef (deity) 5
resonators (chordophone) 86, 88, 90, 91
rhytons 101n9
Rift Valley 17
rim-blown flutes 96, 98, 99, 100
rites: musical instruments 117; performance of 6; standard groups and ensembles 131, 132; *see also* funerary rites; purification; sacred rites
rituals: divinisation 137; groups and ensembles in large-scale 132–133; instruments played at 89, 95, 100, 111; magical 61; music at 30–41; re-enactment of mythological stories 37, 151; *see also* feeding rituals; intimidation rituals; sacrifice(s)
Roman period 2, 16, 19, 116, 120
rulers *see* kings and rulers
Rusa II 126n18

sacred 3
sacred images (cult objects) 6, 7, 8, 10, 12, 13, 14, 15, 39
sacred mountains 19, 20
sacred poetry 144
sacred rites 50, 134
sacred rooms (temples) 8, 10, 12, 14, 15, 16, 120
sacrifice(s) 17; instruments played at 89, 90, 94, 141, 169; music at 31, 32, 36, 37, 40; offerings 6–7, 136–137; prescriptions and timetables, Israel 142; purposes of 6; use of groups and ensembles 132; *see also* burnt offerings
Sahel el-Baghlieh **115**
Saltu (deity) 49
Samaritan Pentateuch 18, 24n33
Samuel (HB) (prophet) 18, 19, 23n19, 23n30, 42, 43, 46, 51n4, 60, 61, 65, 72, 77n4; musical instruments 111, 113, 114
sanctity: of musical instruments 134–136, 145; of temples 8
Saqqara 96, **115**, **116**
Sarduri II 121
Sarissa 11–12
Saul 42, 60, 65, 72, 144, 152
scales 157, 158, 160, 161, 162, 166
Schneider, Tammy 19
Seleucid period 101n4, 108, 118
Senusret II 139
Senusret III 40, 40–41, 53n30, 54n31
sequential string numbering 170
Sety I 53n23
seven string numbers 157
shaking instruments 113–125
Shamash (deity) 38, 49
Sheba, Queen of 140
Shechem 4, 5
Shehata, Dahlia 132, 137
Shilhak-Inshushinak I 21
Shnider, Steven 159
shofar calls 42, 64, 67, 95, **133**
short trumpets 94, 95
shouts/shouting *see* battle, shouts; cultic shouts
shrine models 21
Shub-ad 172n14
Shulgi 38, 39
side flute 98
Siebes, Ronny 159
siege rituals 67, 68
signalling: use of bells for 119; use of horns for 69; use of trumpets for 31, 72, 93, 142
silver instruments: bells 123; pipes 98, 99, 102n13; trumpets 92, 93, 141–142
Sinai 4, 118
Singer in the Interior 45
singers: Egyptian 39, 40, 45, 50, 134, 139; female 45, 50, 63, 64, 65, 66, 134; Jerusalem Temple 43, 135, 136, 140, 144; male 37, 40, 45, 65, 66; *see also* song and singing
Sinuhe/Sanehat 74, 79n22, 79n23
Sippar-Ammanum 138
sistrums 45, 64, 65, 114, 117–118, 126n14, 152
sit shamshi 20, 21, 24n35
sky god 19
slung drums 45, 107–108
small bells 120, 124
small-scale processions: groups and ensembles 133–134
Socoh 65
solo voice 133, 163
Solomon 42, 140, 144
Solomon's Temple *see* Jerusalem Temple
The Song of Agushaya 49, 100
The song of the hoe 109
The Song of the Sea 64, 65
song and singing: at liturgies and rituals 31, 32, 33, 37, 38, 39, 40; in prophetic ministry 61; in processions 41–42, 44, 134; in warfare 64–65, 67, 69; *see also* chants; hymns; singers
sonority: bells 119; harps and lyres 8, 88
sound *see* musical sound world
sound quality: bells 119; natural horns 95; trumpets 94
spatial settings: cultic activity 7–21
speech: ordinary 82
spiritual awareness: music and heightened 60
standing stones 17, 18, 21, 23n28
star-shaped heptagram 159, 169, 171n8
statues: music at worshipping of 35
stelae 19, 23n24, 23n27, 40, 54n41, 75, 125n3, 139
The Story of Sinuhe/Tale of Sanehat 74, 79n22, 79n23
'string-four-small' 155
stringed instruments *see* chordophones
strings (instrument): harps and lyres 86; lutes 91; music theory in Babylonian tablets 155–157; numbers/numbering 157, 162, 168, 169, 170
Sumer 70

Susa 21
Swaddling, Judith 126n14
syllabic music notation 163
symbolic ideophony 90, 120, 152
synagogue chants 164, 172n16
syncretism 3, 5, 6
Syria 36
Syrian deities 5
syrinx 44, 91, 96

Taane Project 14
Taharqa temple 94
tambourines 42, 60
Tel Haror 4
Tel Shikmona 112
Tell al-Rimah 13–14
Tell el-Qedah (modern for Hazor) 10
Tell Taʿyinat (modern for Calneh/Kinalua) 10–11
temples 7, 8–9; Anatolia 5, 8, 12–13; close association of court and 137, 138–139, 140; Egypt 7, 8, 14–16, 19–20, 45, 72, 79n22, 94; groups and ensembles 132; illumination 8; Levant 9–12; Mesopotamia 8, 9, 13–14; prostitution at local 3; storage of musical instruments 134–135, 136; use of bells in 120; *see also* Jerusalem Temple; mortuary temples
Tenenet/Tjenenet 22n10
terracotta item(s): bells 123; depicting a drum 107; depicting harps 44
Teshub (deity) 19
Theban necropolis 99, 102n15
Theban temples 14, 15, 39
Thebes 39, 40, 45, 74, 92
theology 3–7
theophoric kingship 21n3
thin string 155
Third Intermediate Period (Egypt) 45, 50, 99
Til-Tuba, Battle of 70
titles: of female singers 45
tombs 8
tonal system 166
tone-circle 159, 171n10
Torah 48
Toth (deity) 51
Tower of Babel Stele 23n24
transverse/cross flutes 96, 98
troops: directing and mustering 64, 69, 72, 95, 151
troupes (musical) 50
trumpet(s) 91, 92–94, 101n7; conch 95; Israelite 31, 141–142, 152; pitch 167; potsherd depicting 92; temple groups 132; use at liturgies and rituals 31, 35, 169; use in processions 42; use in warfare 64, 68, 72, 73, 93, 94, 151
trumpeters: Egyptian military 72, 74
The Truth About Babylonian Music 162
Tsedaka, Benyamim 24n33
tubes: end-blown flutes 96; reedpipes 96, 97
tuning 160, 166; Babylonian tablets 157–159; harps and lyres 87–88, 156, 169, 170; *ishartum* 172n18; lutes 91; patterns 88, 91, 158, 166, 167, 168, 171n8
Tutankhamun trumpets 92, 93, 94, 101n7
Twelfth Dynasty (Egypt) 51, 139
Tyre 67

Ugarit 19, 100n1, 111, 136
Ugarit tablets 3, 6, 21n4, 35–36, 154, 160; h.5 52n14; h.6 161, 162, 163, 171n12; music theory 160–161, 170
under-deities 136
Unug 69, 70
Upper Egypt 75, 76, *87*, **115**, **116**
Ur 38, 70, 88, 98, 99, 102n13, 138, 172n14
Ur-Nammu stela 125n3
Ur-Utu 138
Ur/Urim 38, 53n18, 70
Urartian bells 120–122, 126n16
Urartian people 19
urban culture 19
Uruk 13, 37
Ushumgal-kalama 44, 137

Valley of the Kings 45
Van (city) 19, 121
verbal activity: sound intrinsic to 151
verse *see* poetry; Psalms (HB)
victory: and dance 70; involvement of deities 59; as mark of divine approval 3; music and song in 64–65, 67, 70, 75
Vitale, Raoul 161
vocal music 163–165, 167, 168; *see also* human voice; singers; song and singing
vows/votive offerings 31, 32, 118, 123, 125, 136–137, 167

Waerseggers, Caroline 159
wailing 30–31, 65, 66, 67

wall paintings: flutes 96; lutes 90; music and warfare 72; musical performance 41, 45–46, 49–50; pipes 100
warfare: belief in apotropaic properties of plucked-string instruments 152; decisions to engage in 2, 59; music and 64–77; use of horns 95; use of pipes 100; use of sistrums 117, 118; use of trumpets 72, 93; *see also* battle; combat; troops; victory
Wedjahormedenyt 139
Weni 75, 79n25
West, M.L. 161
What is the Samaritan Pentateuch? 24n33
whirling/dance 47, 49, 100
wild dance 49
wind instruments *see* lip-vibrated wind instruments; reed-vibrated and edge- and end-blown pipes
wine: libations of 6, 21
Woolley, Sir Leonard 99, 172n14
worship 6–7, 32
Wulstan, David 154, 156, 161, 168, 169, 171n11

Yahweh 4, 5
Yemen 164
Yerevan 121
YHWH (deity) 3, 4, 32, 33

Zadok 144, 146n6
Zechariah (HB) 119
Zephaniah (HB) (prophet) 59
Zertal, Adam 18
Ziegler, Nele 53n20, 53n21
ziggurats 13, 14, 20, 23n24
Zimri-Lim 138
Zincirli 43
Zion (=Jerusalem) 31, 33, 46, 47, 141
zoomorphic rattles 114, **115**
Zuph 19